

A CRITICAL AND EXPERIMENTAL STUDY  
OF THE  
SERIAL PAINTING METHOD IN CHILD THERAPY.



Christopher Haffner MB.DPM.  
Department of Psychological  
Medicine,  
Guy's Hospital,  
London S.E.1.

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### SUMMARY.

It is generally assumed by psychologists that childrens drawings and paintings can be an aid to the study of personality. More recently these are being used as an adjunct to various therapeutic techniques. But the rationale for their employment as a diagnostic and therapeutic aid is, at the present time, largely based on a worker's orientation and inclinations and, as a part of psychotherapy they often become a tool which may be manipulated by the therapist to serve interpretations.

In comparison with their large scale application in practice the number of fundamental and empirical investigations in this field has been small and no systematic studies about the total significance of graphic methods in children with emotional disorders exist. This fact led me to think that an empirical investigation on experimental lines in conjunction with therapeutic work could help in providing more than intuitive clues to the manner in which serial graphic productions fulfil a function in therapeutic methodology. The research, on the lines put forward by me, was approved by the Board of Electors of Guy's Hospital as being suitable for the work of the Sir Alfred Fripp Memorial Fellowship in Child Psychology, which I held from June 1947 until December 1949.

Basic Aspects. The research contained in this thesis is presented in three sections. These sections represent the actual

stages through which it has evolved during the period of three years.

1.A study of the foundations upon which further progress in this field is to be built, and the definitions of aims.

2.The application of serial graphic methods to individual case study.

3.The comparative examination of certain painting trends in a therapeutic group of children.

Accordingly section I.gives a critical survey of some of the more important work in the field of development and in those aspects of personality study which have a direct bearing on the method developed for this investigation.

Section II.contains a detailed account of the practical application of this method from the clinical standpoint in a boy aged 6 who suffered from asthma.Here the main emphasis has been placed on trends in form-expression.Spontaneous verbal associations, given at various intervals in response to serial productions, formed an integral part in the method of eliciting the child's attitudes to these expressive trends. A series of 28 consecutive microfilms in colour is presented with this case report.

Section III. gives an account of the group as a whole and postulates criteria for assessment of "primary graphic trends". These are concerned with kinesthetic elements in painting and attitudes to space, colour and form. These criteria were initially developed from empirical study of a large number of paintings. Variants to graphic trends were studied by means of an analysis



in each child of 25 consecutive productions painted during the interval of one year. The products were assessed with the help of a four point scale. By means of this a much more accurate impression of the total material as well as of the individual <sup>various</sup> contained therein could be gained than through empirical examination alone. Finally the relationship between certain extreme tendencies shown and the type of disturbance from which the child suffered was examined. The various subsections contain illustrative case material.

The therapeutic group on which these observations are based consists of 40 children who suffered from a variety of emotional disorders and somatic dysfunctions. In some of these cases treatment and follow-up extended over a period of 4 years. Selection was determined by age limitation, preference for painting, a preliminary period of observation, exclusion of children with defective or "dull" intelligence, and absence of prolonged spontaneous remissions of somatic symptoms.

Graphic material sent with the "appendix" to this thesis contains a further selection of colour micro-photographs from many different children and a variety of original productions. Table III. on page 154 contains reference numbers for trait descriptions and illustrations in the appendix. All this material is the property of the Department of Psychological Medicine, Guy's Hospital, London S.E.1.

Conclusions. Very generally speaking these may be divided into two parts,

1. General conclusions about the clinical validity

of graphic methods in child therapy.

2. Specific findings about the differentiating value of graphic form and spontaneous verbal associations.

1.) Serial methods in child therapy offer distinct possibilities for diagnosis, treatment and prognosis with children who show a preference for colour-media. (See p.23.) The meaning behind the surface aspects of childrens' art work is more difficult and complex than many recent studies lead us to believe. This applies in particular to interpretive approaches. The evaluation of childrens' art work requires experience from the therapist or investigator.

2.) The question of specificity of formal traits and associated verbal responses in the non-psychotic child is an interesting one. Consistent traits are frequently seen in the serial patterning over periods of time. Their value as indicators would depend on our ability to isolate three main groups of components from any individual series,

a. those that are relatively consistent with maturation,

b. those that are based on innate factors of the individual constitution,

c. those that are an expression of temporary emotional conflicts.

SECTION I.

## 1. INTRODUCTION

There are certain well known difficulties which beset the path of a psychiatrist in his therapeutic endeavour with children. The establishment of technical procedures in this field was originally designed to find substitutes for free-association as practised in adults. This problem has long been the subject of much discussion and controversy, but it is not yet possible to say anything final about the effects of any of these techniques on the life and mind of the child, for whom their authors designed them. However, in the day by day practice of Child Psychiatry it has become one of our tasks to put these methods to the test and examine some of the far reaching hypotheses derived from their application.

The technique of "Play Analysis", initiated by Hugh-Hellmuth, Klein and Pfister may be mentioned as an example, where new theories arrived at through treatment observation have raised questions of etiology and therapeutic adequacy, while the procedure first applied by the authors is now widely practised in a simplified form known as "Play Therapy". Some psychoanalysts claim that the uncovering of supposed motivations behind a child's spontaneous play, through directed interpretations down to minute detail, has a manifest bearing on "cures" or

"remissions" achieved. Others (37) have stressed the educative value of a progressive treatment relationship in addition to the necessary interpreting of transference. A third group of workers place the main emphasis on the healing effects of a re-activated emotional experience itself. Examples of this type are methods described by Levy (68), which sometimes pass under the name of "Release Therapy". Here the obvious prerequisite is the initial discovery of feelings of focal tension in the child, which become released by being acted out on meaningful objects. Levy has made excellent use of this approach in jealousy reactions through reconstructing family situations with dolls in order to reactivate feelings of guilt and hostility. Allen (1.2.) has shifted the focus from the more limited cause and effect concepts to a general discussion of all which goes on during the treatment process between doctor and child. He distinguishes between three ways by which a therapist may use such a relationship. The first two, the "authoritative" and "causal" approaches, he discounts in favour of emphasis placed on immediate experience. "The therapist begins where the patient is and seeks to help him to draw on his own capacities towards a more creative acceptance and use of the self he has. While maintaining an interest in understanding what has been wrong, the therapeutic focus is on what the individual can begin to do about what was, and more important, what still is wrong."

In each of the cited four examples emphasis is placed on a slightly different aspect of therapy, although all the authors are convinced of the validity of their own method. While Allen gives what is likely to be the most general formulation of treatment dynamics in terms of inter-personal relationships, this very generality omits to attach sufficient importance to a problem raised by all therapeutic work with children. The extent to which a therapist may set free tendencies which have not at all or only in parts found release in the child's natural environment, has been insufficiently reflected by his and many previous studies. To put this question somewhat differently, we may ask, are there specific modes of release sought during treatment that spring from innate personality as well as from specific emotional disturbance? If a child is really helped "to draw on his own capacity towards a more creative acceptance of his self," then it is worth knowing what these spontaneous creative aspects are which bring about release, how they become manifest, and if they stand in a time-relationship to fluctuations or remission of emotional disorder.

During my therapeutic work with children I have attempted to learn more about these questions through the use of a variety of unstructured materials, which can be invested with the child's own fantasy expression. The



place of brush painting seemed of particular significance here.

About 5 years ago, whilst working in a pediatric ward, I had to attend a six year old boy convalescing from an attack of cerebro-spinal fever. His physical state gave no grounds for anxiety, as he showed no after-effects of the illness. Every weekend his mother and little sister paid a visit at the hospital which seemed to result in unusual emotional upsets for the child. Whereas throughout the week he remained surprisingly well controlled and cheerful, playing with his room-mates, prior to the arrival of his visitors and sometimes for one or two days afterwards his mood underwent a complete change. During these periods it was impossible to hold his attention, he became unmanageable and refused to take food. As the weeks passed these upsets became worse, so much so that his mother was asked not to return until he was quite well. But she refused, being unable to accept the reasons given to her. A short while later the child had discovered a box of paints belonging to someone else and wanted to try them out. From that time on he occupied himself almost incessantly with these colours, especially during and after the weekend visits. He continuously asked to be given fresh sheets of paper which he smeared with paints in, what seemed even for a boy of 6, a totally haphazard manner. Gradually a collection of his daubs accumulated which, when looked at

in a serial order, made it increasingly evident that there was a subtle method behind this apparent lack of meaning, which had something to do with the ways in which these paintings were conceived and the structural elements therein were organised. Briefly he began by painting red roundish, oval or sometimes square masses which he repeatedly overlaid with mauve, black or blue. Later his patterns became brighter as he omitted to overpaint the intense colours, so that it was often possible for him to create more definite shapes with the darker tones. Thus, one day he would paint a red mass in the centre of the page, which looked somewhat like a balloon. Around it all sorts of things and shapes were grouped. Eventually this central mass assumed for him the meaning of a house (with windows and chimney etc.) on either side of which two black human figures appeared. This identical pattern he repeated at least 6 times. At that stage his emotional outbursts had gone, but with their disappearance he had also lost all inclination to paint nor could he be pressed to do so. The whole ordeal of the previous month seemed quite forgotten. This sudden wish to use selective colours for spontaneous creation of certain repetitive shapes and the equally sudden desire to stop doing so, appeared quite independent of external factors and therefore must have been determined by something coming from within himself. At first sight it

seemed as if he had to free himself, as soon as his visitors left, from something which he formerly could only express through impulsive behaviour and crying.

Sometime later I had the opportunity to work in a psychiatric ward for children, where subjects with emotional disturbances could be observed for prolonged periods of time. I was anxious to experiment further with colour play and to find out to what extent this could be of value in psychotherapeutic procedure. During the last four years I have been engaged in a study of spontaneous painting from several angles. My first idea was to learn if this mode of expression approached more closely than play with other materials to adult free association. In doing this it became necessary to collect graphic productions in a serial order and study them from the standpoint of both content and the structural patterns typical of an individual. At first the use of such an approach during treatment had to be tentative and only suitable for those who showed a liking for coloured materials. But the number of individuals who adopted such media was quite considerable and a more systematic study of a selected group of children with functional somatic disorders was made whose remission could be assessed in a more objective manner than that of most other types of cases commonly seen in psychiatric departments.

In the study of previous literature related to therapy, I was surprised at the dearth of systematic records about the patient's capacity for spontaneous creative expression, in view of the large number of descriptive accounts devoted to symptom phenomena, technical approaches and psychoanalytic mechanisms. One seeks in vain amongst many well known investigations for descriptions of the expressed trends of such creativity. In adults this may be explained by dependence on free association, where verbal abstractions of unconscious material (much of it originally in the form of imagery) may often result in loss of the most personal constituent of fantasy, the image itself. Jung (57) has stressed what is perhaps even now, not always sufficiently acknowledged in psychotherapy, namely that series of images are often required to bring about resolution and clarification of unconscious conflicts. The work of Böhler, Lowenfeld, Moreno and others illustrates that approaches of this kind are especially valuable in young people. But there is a great need to gain understanding not only of the various ways individual children obtain release through spontaneous expression, but also to develop techniques which provide an avenue in this direction. With this in view the present study was undertaken.

These issues are obviously very wide issues

since we need only to remind ourselves of such problems as, the development of personality in the light of specific cultural influences and the moulding effects of environment generally, in order to appreciate how little we know about the relation between symptom remission and any specific treatment. For example the significance of environmental factors in conditioning certain types of psycho-analytical interpretations may be manifestly great. We lack many data about child rearing in our own civilisation which would be helpful to a therapist, as has been illustrated by studies about primitive cultures (58.81.14).

For reasons of this kind the term "Play Therapy" at Child Guidance Clinics carries with it at present the implication that its nature is not fully understood. In some ways it is an experimental procedure, out of whose realisation such clinics could contribute to research, whether through the application of new technical approaches or more detailed studies into the pathology of child development. Another reason why present day child guidance techniques are often ill-defined is that undue emphasis has been placed on a worker's orientation, although the basic material for understanding of any child's mental state and progress during therapy must originally come from observation. Written observational records, compiled after the



interview, have obvious shortcomings and defects. They frequently lack the spontaneity and first hand flavour of the play situation. In some clinics mechanical recording apparatus or cinemetographic aids have been employed to overcome some of these drawbacks.<sup>1</sup> These may serve as valuable objective records of the type and tempo of motor activity and the mood of the child, but they may reveal little of his subconscious experience in the treatment situation. It remains an open question to what extent the observation of children's play alone can provide definite clues for the interpretation of their emotional disturbance. Despert (26) in recent contributions takes up the question of dichotomy between investigation and therapeutic technique with reference to play. According to her the two approaches overlap, as "it is not possible to place a child in an investigatory situation that is completely devoid of suggestion and interpretation". In the most general terms this would imply that both investigation and treatment carry with them therapeutic possibilities, the therapist playing the role of an observer whose participation must be defined from the outset, if such interviews are to be valuable to research. In addition such research must be specifically concerned with the

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1. Despert, J.L. Protocol of an Individual Play Session. Journal of Nervous and Mental Disease. Vol. 98. No.2. Aug. 1943.



types of suggestionand suggestive interpretations received by a child, who is to be placed into such an investigatory situation. Are these interpretations to follow certain rigid lines of psychological hypothesis, or may they be based on trends themselves apparent in the individual's development?

For the elucidations of these questions a most important source of material comes from records created by the child himself. As a research project this useful avenue has, in my opinion, not received sufficiently detailed attention, although to a limited extent it is, of course, applied at almost all child guidance clinics. Such records may be obtained in several ways, for instance by means of photographing "worlds" constructed during treatment sessions, or alternatively by collecting a series of the patient's graphic or plastic productions. The employment of serial observations by itself is not a new approach. But in therapeutic work it has, so far, not been applied consistently enough to provide information which can be related in time to overt patterns of behaviour and to the variability of a specific emotional and psychosomatic disorder. This short-coming is particularly striking with products from pictorial sources which, as often suggested, may well contain personal associations equal in significance to reconstructed play situations. Child analysts make not infrequently the

a priori assumption that graphic expression in children can be equated with any other form of play and interpreted along similar lines. But any single observed phenomenon may have varied meanings. Before we arrive at interpretations we have to learn more about the place of graphic expression in relation to other phases of growth and about its possible deviations in emotional disorder. In many instances we must attempt to learn what pictorial expression means to the child himself rather than to the adult who sets out to explain it. In the present study I have, therefore, not used Freudian or Jungian symbolism for a working hypothesis, although in the individual case such interpretations are possible and often reasonable.

As Piaget (90) has shown, up to the age of about eight years the child thinks of situations as "wholes", and cannot give causal analytic explanations for them. Nor is it likely that he will either understand or accept these from an adult, however much a part of the child's own world he may be. A child's experience of wholes links closely with attitudes to inner and outer reality. Inner experience and outer experience have equal existence and are interchangeable. Piaget calls this thinking "realistic", as it is essentially based on the reality psychic experience. During this period of development his speech, motor activity and graphic expression show changes in kind as well as degree. The child's capacity

to project himself into the world around goes hand in hand with the changes in his maturation. These projective mechanisms reveal themselves through the active process of creating spontaneous pictorial patterns, just as they can be studied by means of perceptive experiments with the Rorschach Ink Blots or similar tests. The difference between the former and the latter is the progressive availability of responses not only at a single moment as in standardised test situations, but over periods of time which are a part of the child's maturation. The justification for a technique of this kind would lie in,

- 1). The wide and varied use continuously made of childrens' paintings as a means to diagnosis and an adjunct to treatment.

- 2). The application of the developmental and psychosomatic viewpoints to a serial study of these over continuous treatment-phases.

- 3). The attempt to make the painting process a more integral part of treatment, by obtaining projection responses of particular significance in the context of a child's disturbance, general life pattern and environment.

Owing to the need to adjust such an approach to the great plasticity of mental mechanisms in childhood there have been many unavoidable difficulties in this

research and I have but touched upon its possibilities. I consider it a pilot investigation to explore and define the use of spontaneous pictorial products in a variety of psychiatric disorders, and not as a set experiment to establish measurements or norms. The present study, furthermore, deals only with a limited aspect of my observations, namely the relationship between certain trends apparent in pictorial expression and functional somatic symptoms in a selected group of children who all showed various degrees of emotional disturbance and maladjustment. Facilities for such a study, in conjunction with psychiatric and therapeutic work, were provided in the Department of Psychological Medicine, Guy's Hospital. I have been engaged upon this project since the summer of 1947 and the major part of it was undertaken during my tenure of the Fripp Memorial Research Fellowship in Child Psychology at Guy's Hospital from June 1947 until December 1949. Opportunities for making a survey of relevant literature about graphic productions in children were obtained through various library facilities, incl. the Guttman-Macley Collection at the Institute of Psychiatry, University of London.

2. A I M S.

In the last two decades increasing use has been made of more or less standardised test procedures involving visual perception. Many of these have found general or more specialised application in psychiatric work, such as the Rorschach Ink Blot Test, Murray's Thematic Apperception Test, Bender's Visual-Motor Gestalt Test, Stern's Cloud Pictures, Lowenfeld's Mosaics, the Szondi Test and others. It is, as yet, uncertain, how much any of these methods is designed to assess an individual's capacity for unplanned or spontaneous creative expression, which becomes progressively revealed during his early phases of development. Graphic expression is a specific activity which in childhood remains subject to certain laws of psychic development. Clinical observation in child psychiatry and longitudinal studies by psychologists indicate that this activity may become affected by emotional disorders of various kinds, and, because of this, childrens' productions have often been employed as an aid to diagnosis and treatment. Hitherto on the whole, greater importance has been attached to the content of graphic productions in order to relate it to the individual's conflict and disorder and to interpret it in this light. However, a child's own specific pattern depends not on



content alone but even more upon interrelations between content and certain structural elements that project content into form.

Although we possess an enormous amount of published work on the pereceptual elements of structure in relation to the Rorschach Experiment, up to the present few investigations have told us much about the significance of spontaneous creation of structure as part of psychotherapeutic procedure. The chief sources of earlier studies have been pencil drawings or designs first outlined with pencil and later filled in with colour. Within recent years (5.16.) evidence of the value of employment of colour-media alone has accumulated, especially in the pre-school child. The possible significance of this is discussed in later chapters.

The study of pictures may be undertaken from many angles, and the significance of such work is frequently dependent on the investigator's bias, or restricted to what is described as "objective" in present day psychological research. Neither seem entirely suited for a deeper understanding of spontaneous expressive trends. Yet the medical psychologist, who provides a helpful and impartial background to the child's attempts at self-expression is in a unique position to undertake such a study, provided always



he can permit himself to "let things happen". The crux of the matter is the building of a technique which will allow spontaneous graphic activity to go hand in hand with specific observations about the child's painting behaviour and attitudes to the finished products of his creation as well as the phenomena of identification and projection in regard to these. Many complications inherent in this approach are immediately obvious, but others only become apparent with time as each individual child reveals his personal modes of self expression and teaches the therapist how they arise. The therapist then slowly becomes aware that preconceived ideas of symbolism have at first a small place in such an undertaking, however stimulating they may appear to him. Sometimes the pictures will have a meaning for the child totally different from that which they have for the therapist, but with time he will notice certain consistent designs in the construction of serial elements, which he could not have predicted at the outset.

The interrelation between content and form is sometimes vividly demonstrated through constancy of projections. This is, therefore, a useful starting point for a therapeutic approach, for projection-mechanisms are also of primary importance in a child's growing awareness of his conflicts and in the therapist's handling of the relationship.

Assuming that a given child will express himself through graphic media we may ask ourselves how his productions can be fitted into the pattern of his creative activity. He may, for example, persist with certain primitive formal elements or draw shapes that seem to have no resemblance to commonly accepted modes of representation for his age. These he invests with a personal and often inaccessible meaning. Often such features have been explained in terms of "regression", "automatism" or "perseveration". Although such designations may be applicable in a general way they tell us nothing of the connexions between these supposed deviations and the child's urge to form or the attitudes he takes to the world around him, nor do they explain how these phenomena represent a stage in his maturation only to be discarded when readjustment has taken place between his inner and outer world. Their accessibility would depend on an analysis of the primary tendencies which build up graphic activity as a whole. Although such trends have never been adequately defined, they could very likely be isolated from a study of very young children. An attempt to do this has been made in Section II of this investigation. The most specific aspects of projection are built around form perception and expression. Here colour enters as an important counterpart to form. We know little as yet of the relation of feelings in young children to colours,

but again we often encounter a striking selectivity here which seems more than accidental. In order to learn about the meaning of these preferences from the standpoint of the present study, the different ways in which children with somatic dysfunctions associate with colour and form have been observed. These observations led on to the question of possible links between endopsychic content and form elements as seen in an established painting series. The progressive unfolding of persistent fantasies through their pictorial expression helped to define and analyse structural elements in paintings which often suggest an interdependence of apparently separate traits in painting. This procedure involved several levels of personality organisation and because of this it is of a more direct interest to the treatment process. On the one hand we may be dealing with tendencies based on kinetic control which exercise a decisive influence over the emerging patterns. On a different level we have to consider the ways in which a child's environmental attitudes link with graphic behaviour and expression, especially his manner of reacting to the limitations imposed by the dimension of the painting page. Finally we can observe various forms of adjustive behaviour finding expression through symptom patterns, that reflect strongly his salient emotional characteristics. Here the mechanisms of identification and projection seem to appear through

their perceptual anchorage and often link up with the child's attempts to integrate these into a whole. To summarise therefore, the working concept is based on the hypothesis that during early childhood expression from graphic sources, both conscious and unconscious, passes through stages which can be related to other aspects of maturation as well as to specific individual traits in the child. By the application of "projective painting" to treatment we aim at studying by progressive and retrospective analysis the following phenomena which collectively enter into the process of pictorial expression.

1. Its continuity in time as shown by serial trends.
2. The graphic expression of kinetic qualities.
3. Its continuity within controlled space, portraying freedom or constriction.
4. Its perceptual anchorage, by relating endopsychic content to colour and form.
5. The child's capacity to integrate isolated elements into a whole.
6. The diagnostic and therapeutic validity of painting trends.

### 3. TECHNICAL ASPECTS.

A brief digression will be necessary before discussing the technical aspects of "projective painting" in the treatment room. It is well known from longitudinal observations of childrens' art work that environment tends to exert a decisive effect on its evolution, which is a limiting factor in any research of this kind. The parts played by art teaching in schools and by the child's maturation and the interplay of these forces with the whole environment have never been sufficiently defined, if indeed they can be defined. One reason is that in our cultural milieu above the age of 5 no children can be found who are given entirely free range in the modes of expression natural to them. It seems, nevertheless, probable (31.93.) that apart from the influence of an often all too rigid training at school, trends towards formalism in drawing are progressive with advancing age. This is partly at least related to the development of the child's cognitive faculty. Free brush painting with colours is an activity which naturally predisposes the subject to greater fluidity than drawing, and may canalise an altogether different attitude to structure and in this way help to show up formal elements, not normally suggested by pencil drawing. Some investigators (47.76.78.93.) have called attention to what is described



as "duplicity of styles" in young children.

Unfortunately this interesting phenomenon has so far not been sufficiently investigated by psychologists.

One of the aspects of this painting method is the sole employment of colour without resort to pencil or crayons. It became, thus, necessary to find out at first hand how young children individually behaved with coloured media, during their first visit to a clinic. In 1948 the study of Altschuler and Hattwick became available (5.), which is so far the only comprehensive investigation of colour attitudes in young children. The authors' findings have proved of value in the final establishment of the method.

Selection of Children. The children included in this preliminary survey have been observed at three different Clinics in the London Area: the Child Psychiatry Unit of Guy's Hospital, the Pediatric Department of the Maudsley Hospital and the West-Essex Child Guidance Clinic. The duration of this investigation extended from January 1947 until December 1950. The observations were designed to discover the degree of preference which children of all ages show for brush painting in a playroom containing a variety of other materials. The subject concerned was

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1. The standard equipment of the playroom consists of a selection of structured as well as unstructured materials of the type in general use in England. The chief items are:-

1. Water and sand. Clay or plasticine.
2. Plain and coloured wooden blocks of different shapes.
3. "Miniature worlds" with trays.
4. A selection of puppets.
5. A "Wendy House" and other large size toys such as hand-carts and engines.



given complete freedom to handle any of the available toys. The greater number of cases seen at the Maudsley came from working-class communities of the Camberwell and adjoining districts. At the West Essex Clinic about half lived in working class or lower middle class homes in Walthamstow or Leyton, the other half in middle class families in the Forest Areas of Chingford and Epping. At Guy's they represented a cross-section of the London population as a whole with a large middle class element drawn from all over the London Area and beyond, also working class children from Bermondsey and adjoining districts.

The sampling can be regarded as specific only insofar as these children form a cross-section of referrals to the mentioned clinics. Owing to the pre-dominance of Guy's cases there is a slight trend towards psychosomatic problems. Although the numbers quoted here are not quite large enough to permit valid deductions, the incidence for painting materials shown amongst the age ranges up to seven agrees with findings of other investigators. (e.g.5).

The total number of children seen in this survey was,

At the Maudsley Hospital	21
At the West Essex Clinic	144
At Guy's Hospital	<u>185</u>
	350.

This all over total showed the following age distributions and preferences for brush painting.

<u>Age</u>	<u>Total</u>	No. who paint spontaneously in addition to play with other materials.	No. using brush-paints exclusively.	No. who did not wish to paint or draw.
2-3	6	4	-	2
3-4	18	10	4	4
4-5	19	6	9	4
5-6	33	9	19	5
6-7	61	31	12	18
7-8	78	30	17	31
8-9	46	14	10	22
9-10	38	2	16	20
10-11	29	1	8	20
11-12	<u>22</u>	<u>1</u>	<u>7</u>	<u>14</u>
Total:	350	108	102	140

The above figures, therefore, may serve as an illustration of the popularity of this line of approach. Next some of the technical aspects must be considered.

In order to reduce incidental selection of colours and at the same time arrange for a reasonable opportunity of choice, materials must be easily distinguishable, from the child's angle often a difficult task when dealing with children under 4. To make allowances for this it was decided to use unmixed powder

colours which may be filled into sufficiently large circular containers on a single tray. If suitably placed the whole colour range can be seen at one glance. Solid colours in blocks have proved much less satisfactory, as they could not be perceived so easily and, later as the result of mixing tended to become muddy. The same applied to prepared poster colours in jars. Luminosity was clearest in the powdered materials, whose employment on the whole also tends to prevent indiscriminate mixing prior to placement on paper. This is an advantage when studying such phenomena, as for example, overlay or side by side placement of colour-mass.

The question of finger paints was also gone into, in view of the high claims made for them as being a more plastic medium for exploring the dynamics of overt or latent behaviour trends. (16.83). During 1948 they have been offered to a small number of children and, while they certainly provided for a very large measure of plasticity, they would have been a handicap in a research of this type as the amount of supervision required would have been inconsistent with therapy. Furthermore the difficulties of interpreting the final products would have been great, as the various stages of creation are indistinguishable in the finished painting. Early elements are nearly always blotted out by later ones and can no longer be traced back to their roots. Analysis would

either have depended too much on intuition or recording devices would have been necessary during painting for the isolation of separate phases.

#### Technical Criteria.

For painting media to be suitable during treatment and applicable to the present investigation the following criteria had to be satisfied.

- 1). A child from 3 years onwards should find their manipulation easy.
- 2). They must be plastic to give a wide enough range for spontaneous structuralisation.
- 3). The same selection of colours must be available for all subjects in order to allow for comparisons.
- 4). Chance selectivity and indiscriminate mixing prior to placement on paper should be minimal.
- 5). The painting page to be of constant size so as to permit serial comparisons in individual cases.
- 6). A constant size of brushes to be available.

#### Procedure.

The colours include red, yellow, blue, green, brown, mauve, orange, black and white. One small, one medium, and one large brush are provided. The size of the painting page is 10 by 15 ins., its colour white. The painting table, of suitable height for young children is part of the play-room, in which a sand case, plasticine or clay, small word toys, a dolls' house with

small dolls and furniture are constantly available. The child is left to choose his own material for play, but encouraged to paint if he wishes to do so. Frequently an occasion for this arises at the beginning of treatment as he becomes interested in the various materials. Only a brief demonstration to point out to him the different size of the brushes and show how the powder-paints may be transferred on to the page will be necessary. Often it is unnecessary to do anything more than merely approve of his handling of the colours. In the very young, the tense and withdrawn subject, the child who will not leave his mother or the very aggressive child, modifications of the above are inherent in the treatment situation itself. Introduction to the painting process may at times demand much patience from the therapist, as it is imperative for the child to gain awareness of the painting page being part of his play environment, and as such a sample of his environment generally. He will, for example, be given to understand that he is not meant to paint pictures, which are scrutinised after completion, as it often happens in school.<sup>1</sup> An equally difficult

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1. As one boy once remarked, the painting page is "like our playground, it's fenced in everywhere, but you can do a hell of a lot more than in the class room, where the teacher always watches you". (This boy could not stand being fenced in. One of his outstanding painting characteristics was continuous overpainting at the margins).



problem is at times presented by the somewhat older, restrained and often tense scholar who wishes to obtain the therapist's approval for his work. Some of these children show the manifest influence of "art teaching" in their creation of rigid patterns. The teacher's reports to the clinic are often surprisingly unspecific as for example, "he never gives any trouble, cannot understand why referred to clinic. One of our most obedient boys." In a few cases it soon became evident that the rigid designs were symptomatic of a general personality constriction related to parental attitudes and perpetuated in the pupil-teacher relationship.

Generally speaking it becomes part of the technique to give initially to a child an opportunity to reach a more spontaneous level of expression. But such freedom may not always come about through the painting process alone, although it frequently does. Manipulation of more primitive unstructured materials must often be the initial step, and it is important that such activity should be allowed to take place. It is found that in many children the handling of wet sand, clay or plasticine re-awakened the urge to paint in a less restricted manner.

At the conclusion of the preliminary phase or period of observation an impression is reached to what extent painting serves as a spontaneous activity

or merely continues to be an adopted pattern which may later become a hindrance to therapy. Comparative observations on other materials are here of real value and, it is worthwhile to compare the content of play and his movement-patterns with the graphic modes of expression shown.

#### Serial Output and Recording.

Any child's output varies over periods of time and depends on age. These variations are also related in a more complex manner to the treatment process, especially the interest aroused in the child to create something with coloured media. Finally the emotional disorder itself may either interfere with this activity or impose on it its own pattern. The proportionate shares of these aspects can obviously only be individually assessed while treatment proceeds and in some cases it may require a good deal of time.

Generally speaking the age factor is more easily verifiable, as pre-school children often paint short series during a single session, some of them up to seven pictures. These have to be given serial numbers so as to allow for the study of persistent colour usage. Fewer older children paint more than two pictures in one session. The time spent on a single painting remains on the whole surprisingly constant for each individual.

An opportunity for recording associative

responses arises when the child has completed his painting and begins to talk about it. Many children also talk during painting and often the choice of structure is determined by this verbalised content. It was found very helpful to record initially all spontaneously verbalised material on the painting page itself. Often, especially when the child is older he must be told about this first, but it was found that the majority of children did not resent this, on the contrary, asked it to be done. It seemed to them a proof that their activities were taken seriously. The alternative would be recording on a separate sheet, which was much less popular and realistic in comparison. These initial notes are of great value in the understanding of the building, and further elaboration, of projective responses. When after a period of treatment the doctor and child go together over such a series many children have forgotten their initial associations and invent new ones. This transformation of projections frequently serves as a further clue to the evaluation of structural elements and may also be of prognostic value.

Exploratory conversation about content and structure must sometimes become prolonged. It starts with the appearance and the meaning of the objects depicted but eventually may lead to the very root of

an emotional conflict. Its usefulness inevitably depends to some extent on the genuineness of this mode of self-expression.

Eventually a series of graphic productions will form the basis for projections in treatment. As a permanent record these are likely to show a good deal of the child's spontaneous activity and, since their interpretation must be a progressive one, the inter-relation between earlier and later products raises to some extent the question of therapeutic adequacy. It is only through the serial element that the meaning of associations for each individual in the light of the child's persistent or fluctuating painting behaviour becomes revealed.

#### 4. EARLIER STUDIES OF GRAPHIC PRODUCTIONS.

##### a). DEVELOPMENTAL TRENDS

Gesell (42.) views development as a patterning process which consists of growth trends and stages of maturity. If we think of the former as a progression subject to the interplay between natural endowment and environment, the stages of maturity then may be looked upon as "key ages" which stand for levels to which observed trends may be referred to. The changes between levels may be gradual or more or less sudden and it is only through repeated observation that the consistency of developmental sequences appears. This applies in particular to motor activity, speech and graphic expression.

The developmental aspects of drawing in children have interested educationalists and psychologists since the second half of the 19th century. Investigations over the last 50 years have been based on large scale collections of free drawings from many children of different ages, longitudinal studies of individual children and controlled or semicontrolled research. Systematic work on colour element and analysis of spontaneous pictorial products from abnormal children are of comparatively recent origin.



As long ago as 1895, Sully (108) described certain stages in the development of drawing ability arrived at through observations on drawings of selected subjects by pre-school children. These have formed a basis for later investigators. Similar work on a much larger scale has been carried out by Levinstein (67) and Kerschensteiner (60). The latter drew attention to important differences between normal and defective children, a subject later dealt with systematically in this country by Sir Cyril Burt. One of the earliest longitudinal studies we find amongst the publications of Stern (105), in which he follows the graphic development of his son from early scribbles to his 7th year. This boy, however, showed unusual drawing ability as he made successful attempts at drawing a human figure around his 3rd year. In another paper Stern analyses the usages of space in relation to age (107), and was one of the first to demonstrate displacement of normal space relationships of objects and their parts, which so often occurs between the ages of 3 and 5. Another early investigator, Rouma (98), makes much of the child's lack of orientation in space which was first considered by him a feature of "psychic anomaly". His conclusions were that the products of retarded children are comparable to those of younger normal ones. He stresses several distinguishing features, amongst them automatism, spatial displacement and regression. Like other writers he is

not certain whether displacement should be thought of as an anomaly or part of normal development. He gives examples of "indifferent orientation", when the human figure at one time is drawn with legs pointing sideways at another with legs upwards, and "reversed orientation" where the whole drawing is persistently drawn upside down. It is now considered most likely that these features are related to an imperfect conception in the third dimension of the child's body schema. Both Stern and Jeansch (56) thought that in young children who are eidetics or good visualisers any form of displacement is more frequent, owing to their more <sup>vivid</sup> experience of spatial form. Rouma's studies also contain a classification of drawing evolution based on the human figure. Later investigators have elaborated on this with the help of longitudinal studies. Especially memorable here are the accounts by Scupin (103), Dix (27), Luquet (78), Kroetzsch (65), and Eng. (31). Although Burt's scheme (21) is now the generally accepted one, several criticisms have been levelled against it. Herbert Read (93) for instance considers it somewhat too rigid and neat in its conception and thinks that it <sup>neglects the existing</sup> correlation with the child's temperament. Almost 40 years ago Luquet (77) by means of a careful analysis of almost 1500 drawings from a single child demonstrated fluctuations in the

course of development which, he believes, are more typical than the actual stages which can be distinguished. This has since been recognised by a number of other authors. It is consequently difficult to give a causal definition of these stages, i.e. define them from the standpoint of a quantitative evaluation carried out by means of techniques derived from adult experience. Luquet believes that almost from the outset many children work with a "duplicity of styles", one intensely personal arising out of inner experience, the other imitative of what is expected of him by his environment. For this reason he took greatest care that his subjects avoided contact with other children or adults when drawing. Many investigators now believe that owing to our present inability to fully understand the significance of all the elements contained in the process of pictorial representation research on purely statistical lines would lead to a distorted conception of the child's world.

Another criticism that has been held against Burt's scheme refers to his description of the very early phases in the light of kinesthetic factors. A study which suggests how drawing evolution can be brought in line with kinesthetic activity is the work of Krötzsch (65). This author thinks that, although the first stimulus to drawing may be imitation of adults or at least their influence on the child, the actual start is made in

response to innate body rhythm at about two years. His observations may be briefly summarised here as they are not available in English translation.

1). The onset of graphic rhythm can be observed around 20 months, the first purposeful design around 28 months. Initially the drawing or painting is an exact reproduction of coarse rhythmic movements which later become more complex and refined. The tendency at first is to form straight lines which are broken up immediately by muscular effort. This is followed by circular or spiral movements.

2). A new formal development occurs at about 28 months when a link is formed between graphic behaviour and speech. This directs the child to a different evaluation of both modes of expression. At first there is merely the naming of structure which has been drawn, purposive creation develops out of this verbalisation of content. The constancy of object naming arising out of vague resemblances leads eventually to the creation of more specific and personally meaningful objects. Form enters into the child's self-expression parallel to language. Through increasing complexity of rhythm he begins to create dots and loops out of circle, spiral or line.

Kröttsch considers this persistent repetition of loops merely a further stage of very fast rhythm and again

uses the parallel of speech when the child goes through the babbling period. (Emphasis on syllables).

3. With the development of the earliest<sup>†</sup> schematic representation, the "primitive schema" at the age of between 3 1/2 and 4 years, he advances to a new level of graphic expression. However rhythmic activity continues independently and becomes more and more subject to the child's innate disposition. The degree of kinesthetic element present conveys the impression of "fluency" or "rigidity" in his patterns, the aim being control or balance with a gradual disappearance of both extremes.

As shown later both mild and gross disturbances frequently lead to a lowering of the level of consciousness and rhythm previously organised into structure dissolves once more into movement. This may often be seen to a striking degree in the doodling of adults. In a recent paper Guttman, MacLay and Mayer-Gross (49) have studied a large random sample of such products from "normal" adults. In the authors' opinion these can be brought in line with schizophrenic art forms, drawings of primitives and young children and, in spite of the segregation of the doodler, trends of collective psychology have become activated. It is thus unlikely that visual impressions alone or even predominantly determine the outcome of graphic behaviour in children



up to 6 years. As Piaget's studies on conceptual thinking have shown they, like other forms of expression, must be seen against the background of the child's concept of totality.

Controlled Methods. The child's ability to draw or copy primitive line and shape have been used by Gesell (42) and others as a basis for developmental ratings. The quantitative estimates in these investigations show the very earliest formal element to be the curved line, soon followed by the straight vertical at roughly 18 months. This was also found in spontaneous drawings. Altschuler and Hattwick (5) found a predominance of vertical strokes more typical in boys in association with aggressive behaviour. Another increase of the vertical was noted around 3 1/2 years. At both ages childrens' attitudes to environment assume a more assertive character. With regard to the horizontal the findings suggest its appearance after two years, shortly before the circle. The square which presupposes the child's ability to draw angular forms is a much later phenomenon. The above authors found the circle associated with more emotional reactions and the square with better adaptive behaviour. The shift from circular to angular forms was most marked between 4 and 5 years. The investigations suggest that emotional factors may significantly contribute to the emphasis on these

structural elements.

With the acquisition of schema differentiation gradually sets in and may be studied from drawings of the human figure at various age levels. A number of investigators have subjected such drawings to statistical treatment or more rigid controls in order to find norms of development. Schuiten<sup>1</sup> was the first author to use the human figure drawing for an objective assessment of "drawing age". The drawing was compared by measurement with a recognised scheme of the human body and it was found that with progressive maturation children's drawings approached more closely to the given norm, a fact that was already known from earlier longitudinal studies. A better known contribution of this type is the work of Goodenough (46), who used a controlled drawing test for the purpose of analysis of minute differences with the help of a statistical technique. It is employed by some psychologists as a method of preliminary rating of intelligence in children between 4 and 11 years and its correlation with the Stanford Binet Test for age groups in the same range is given as .76.<sup>2</sup> An estimate of the

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1. (Quoted by Rouma) "De vorspronkelijke "Ventjes" des Antwerpsche Schoolkindern." Paedologisch Jaarboek. Vol. 5. (1904).

2. According to Louttit and Browne (J. Consult. Psych. 11. 49. 1947) the Goodenough is amongst the five mental tests now in most common use, the others being the Stanford-Binet, Wechsler, Rorschach and T.A.T.

percentage of children showing different parts of the body in their human figure drawings at successive age levels was made in England by Partridge (95) almost 50 years ago. Her analysis of 1400 drawings covered the age ranges between four and ten years. Her figures are in close agreement with those of Goodenough and other more recent investigators and are therefore worth recording as being applicable to children in this country.

(Abbreviated from Eng.)

Year	4	5	6	7	8	9	10
	%	%	%	%	%	%	%
Body	50	82	92	93	98	99	98
Legs	39	83	92	93	94	98	98
Arms	45	67	71	80	76	85	93
Neck	8	22	20	37	51	63	79
Hair	6	26	27	32	38	58	70
Clothing	16	29	42	56	63	77	82
Hat	32	57	59	76	78	81	84
Buttons	30	37	37	52	55	66	64

Colour Element. Developmental aspects of spontaneous colour usage have only recently become subjects to systematic investigation. Altschuler and Hattwick's work (5) deals with nursery children between 3 and 5 years of age and is based on studies extending over a period of 10 years with observations on spontaneous easel painting in groups, and social attitudes, in 170 American

children of all social strata. The particular value of the study lies in the careful investigation of colour preferences and the authors' conclusions are drawn from statistical correlation between painting trends and behaviour ratings. Their findings illustrate that at nursery level there is strong emphasis on colour as against form. The most pronounced interest was shown between 3 and 3 1/2 years when children begin to express a variety of feelings and are at the same time unable to create the appropriate expressive formal elements. The period of greatest transition from warm to cold colours (i.e. from red or yellow to blue) was again between 3 and 3 1/2 years, which Gesell calls a "nodal period" because of the marked change at that phase from emotional to more controlled behaviour.

These interesting although preliminary findings indicate that in pre-school children the differential use of colour is likely to offer more immediate clues to the nature and degree of emotional life than other aspects of painting. If this assumption was correct it would agree with the view taken by Herbert Read in his book "Education through Art", that "colour as long as it is projected from the unconscious is the most reliable index of psychological disposition. It is possible that the same colour tones penetrate all levels of the psyche, whilst the form into which colour is organised may differ according to depth."

Like colour-form preferences, the responsiveness of different individuals for certain colours has been subjected to a wealth of experimental work in psychology. But here, even more than elsewhere, there is much variability in method and results. In the greater majority of these studies, in spite of ingenious experiments and statistical treatment no detailed clues to the total personality of the subjects studied are available. If colour attitudes are supposed to be related to emotive life, understanding of the latter must be reached as well. If the latter can really be based on unconscious factors it is difficult to conceive how experimentation with a momentary conscious reaction to controlled situations can give a full clue. Von Allesch's work (3) is valuable in so far as it brings out these individual variabilities in spite of rigid ordering of the objective features. His researches deal essentially with the affective aspects of colour in adults under standardised conditions. When one instructs subjects to arrange numbers of colours in a certain order however, many of the difficulties in studying the more complex affective responses of colour reactivity must escape us and this very simplification disregards elements of personal and cultural significance. Eysenck (34), in a summary of the various experiments concludes that a universally applicable order of preference exists according to the affective value of colour and the



and the degree of pleasantness, starting with blue and continuing through red and green into yellow and orange. In studying correlations he, too, comes to the conclusion that the individual variations make group assessments difficult. The importance of these individual variations is even more clearly illustrated by the experiments of Peters (87) on colour conditioning, which indicate that artificial conditioning of a subject's preferences are dependent on various complex associations with a colour which may be both intellectually or emotionally determined. It therefore seems that for the present we shall get only limited support from controlled experimental work in the study of the affective significance of specific colours.

Wolff describes an interesting experiment with coloured paper-dolls selected by children for imaginary families which has something in common with "projective painting" in that emotional fixation to certain colour characters may become associated with meaningful figures in the child's life. In some instances, for example, the father was chosen from the darker and the mother from the lighter dolls. That the emotional factor of colour perception may have strong physiological components was proved by the work of Goldstein and Rosenthal (44) on patients with organic frontal and cerebellar disease. The authors found that abnormalities seen on neurological examination in the sensory and motor systems showed per-

sistent variations related to colour perception. Abnormalities were exaggerated in response to red while minimum deviations were obtained with less intense colours such as blue and green. It is interesting to note that the effect of contrast colours was essentially similar to red.

What has so far emerged is that the affective meaning of colour in children may to some extent depend on the ways it is perceived and interpreted. In the former case both intensity and hue would be of importance. On the other hand affective meaning may also depend on colour naming. Unless we can devise experiments which succeed in studying personality on the basis of colour preference rather than vice versa, we shall be unable to draw valid deductions from any of this experimental work.

#### Colour-Form Attitude.

The ways in which children employ colour to express either shape or mass are related to what is described in psychology as colour form preference, investigated by many workers over the last 50 years. These researches followed on the main two entirely different lines of approach, the typological and the genetic. A large contribution to individual study of colour form preference in adults comes from Rorschach experiments with

neurotics and psychotics. For example the responses of some schizophrenics to the test have shown an increased colour reactivity without a corresponding structural synthesis. From this some workers conclude that colour perception may be more primitive than form perception. However, the Rorschach is a perceptual <sup>test</sup> ~~test~~ and not based on spontaneous form expression.

The work of Katz (59) on the subject's reaction to alternate choice of colour, makes use of a figure composed of white and a coloured triangles. The subject is asked to select from a total of 6 other figures one looking exactly like the original one. Three of these have the same form, the other three the same colour. Results in children between 2 and 6 indicate that a greater preference was shown for colour than form. Desceudres (24), experimenting on similar lines found that colour preference generally decreases with increasing age. Tobie (109), studying pre-school children found that up to the age of almost 4 years the partial emphasis on colour or form was determined by the importance of content. From 5 to 6 onwards there was a progressive emphasis on form until with increasing mastery of it the child acquired the ability to abstract in both directions. Valentine thinks that already at the age of three months a child can distinguish between different colours when shown to him. Gesell, on the other hand, when using

three primary colours for matching, does not find any purposive use before 30 months. Scholl (101), takes the view that even in early childhood the origin of these affinities is the typological difference and not the phase of maturation. He maintains that the dominant reaction is personality-conditioned and speaks of a form type, a colour type and a mixed type. His work was based on sorting tests and tachistoscopic methods of short exposure. His results indicate that cyclothymes are mainly colour reactors and schizothymes form reactors.

A more recent experimental technique was developed by Lindberg (73) with both children and adults in a psychiatric department. This procedure called "Ring Test" is based on the principle of colour and non-colour responses. It consists of 2 sheets of equal size, one a plain one with a blue figure, the other a square one with a red figure. Both sheets contain in addition a ring with an arrow and two concentric squares. The principal differences between the sheets are implied by the direction of the arrow, the position of the other structures and the background. The subject's task is to tell the examiner the main differences between the 2 figures. If colour is mentioned in his first or second response he is rated as <sup>two-colour-attitude.</sup> "positive". Sorting tests were used as a confirmation.

His principal results show that the tendency to colour responses decreases with increasing age. A correlation was also found between physical types and colour and non colour attitudes. The percentage index of initial colour responses in the ring tests is highest in the "substable group" (Sjöbring's nomenclature), which roughly corresponds to the pyknik; the opposite applies to the "subvalid" or schizothyme. The values then decline progressively in the group with the lowest percentage of colour reactors. He found a lower colour response with girls than boys in the groups studied.

The researches quoted by Bühler (18.19.) on childrens' selective behaviour with coloured play material stress that children between 2 and 5 recognise colour dimensions only gradually through the handling of material, "not because they cannot enjoy colours as well as older children, but because they cannot as yet spare enough attention to isolate this dimension."

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Comparative research with adults suffering from brain lesions or congenital blindness suggest that the perception of colour is lost much later or regained

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1. Von Senden, M., <sup>U</sup>Raum und Gestaltanfassung bei operierten Blindgeborenen. Fischer. Leipzig, 1932.



much earlier than form perception. This would, at any rate indicate the relative independence of the two functions, but not necessarily show which is the primary one. In reviewing these findings we must once more take the view that it is difficult to appraise results derived from experimental situations alone into which children have been placed. Lindberg himself admits this and thinks that tachistoscopic tests will have limited value. With qualifications this may even apply to sorting tests. Investigatory situations by themselves are probably responsible for the dissimilarity of some of the quoted findings, as we are dealing with variables which cannot be assessed statistically within the context described.

But the evidence at any rate suggests that colour and non colour attitudes may point to a fundamental constitutional difference but at the same time that they may vary in the same individual during several phases of his early development.

b). "PROJECTION" AND GRAPHIC EXPRESSION

As a diagnostic tool in Psychiatry and Psychology "projective methods" are now regarded by many authors as an instrument of some sensitivity. By means of it it is thought that not only a therapist's understanding of the dynamics of individual psychology could be objectified, but the patient be helped to develop his own insights.

Frank (36), in his recent survey, conveys such an impression when he compares projective methods to laboratory tests and radiological examinations in general medicine. A large part of his exposition is taken up with analogies from various fields of "objective science", such as Mathematics, Physics and Chemistry. These, as we can see it, are used in an illustrative sense to show how progress in understanding psychodynamics may in the past have become retarded by a too persistent reliance on earlier formulae and concepts that have been part of the psychologist's equipment and whose validity he seldom questioned. The author believes that a reformulation of accepted theories may be necessary and that projective methods have some part to play in this.

Frank divides scientific research into two categories,

1. The search for regularities in large aggregates of more or less disordered events, with

deviations to be revealed by statistical studies.

2. The study of process, as established in the divergent event and the unique individual configuration, such as the organism-complex. For understanding of the specific as against the anonymous and unidentified, the suggested methodology is to be based on "indicators" or "signs" rather than samples.

Although it is not unlikely that these methods could in many ways be of greater help to the psychiatrist than the statistically valued test, the proof of their reliability would lie in their temporal validation against clinical findings and other criteria of credibility which can be applied to them. This is technically easier on one occasion under a controlled test situation than as part of continuous therapy. Yet it is as an aid to the latter in demonstrating serial fluctuations of many kinds when projective responses could be of even greater value.

In the course of play therapy projection mechanisms are employed knowingly or otherwise and often in an haphazard fashion. Bühler's and Lowenfeld's worlds worlds, the use of puppetry as described by Bender and Conn, and a variety of other stimulus material all allow for more or less specific structuralisation and meaningfulness. But none of these spontaneous approaches can compare to the diagnostic possibilities claimed by the exponents of the Rorschach Test. Klopfer (63), in a recent

contribution, gives reasons why this should be so. According to him, the extremes in the choice of stimulus material, Sterns Cloud Pictures on the one hand, and Murray's Thematic Apperception Test on the other, tend to focus the subject's attention either too little or too much on content as compared with structure to allow for sufficient discrimination in a one stage assessment. For this same reason, Ink Blots would be less suitable in children for continuous use integrated into a prolonged therapeutic process. In order to obtain the greatest possible variety of responses the child's perceptive process would have to link with spontaneous expression, so that he may use his own manner of conveying fantasy. In serial projective painting this link between structural and content elements potentially exists, but unlike controlled tests, we are not in a position to establish norms which would fulfil certain scientific requirements. In presenting this as a handicap however, we must be aware that even for the Rorschach any norms so far applicable to children rest on a doubtful basis.

#### Sources of Projection.

In a child even more than in an adult a concept like projection may cover a multitude of phenomena and it is not easy to define its function and limits, when this concept is applied to a method allowing the individual the greatest possible freedom for self expression.

According to Frank a projectove technique<sup>"</sup> is a method of

studying the personality by confronting the subject with a situation to which he will respond according to what that situation means to him and how he feels when responding. It is concerned with the idiomatic expression or response of the individual, as revealed in the context of his other expressions, activities and feelings. The essential nature of a projective technique is that it evokes from the subject what is in various ways, expressive of his private world. It gives him the opportunity to invest situations with his own meaning, to impose upon them his own values and significance, especially affective significance." Taken in its widest sense and applied to the plastic phases of early childhood, this would mean that the majority of spontaneously expressed responses as for instance through play and painting, are such an idiomatic expression. As we know, the Rorschach Method depends on verbalised thought in relation to relatively unstructured formal elements which are perceived by the subject. It is therefore important to emphasise that thought content projected into graphic structures is not necessarily by itself of significance, but only when it is linked to the mode in which structure is perceived. This factor, very generally speaking, forms the basis for norms in assessment, and would make assessment relatively dependent on age. Klopfer has summarised the following aspects of personality in children, which the





Rorschach Procedure endeavours to isolate.

1. The subject's mental approach to intellectual tasks, especially his preference for analytic or synthetic thinking.
2. His responsiveness to emotional stimulation from both without and within.
3. His preferred control mechanisms for the regulation of instinctual impulses.
4. The usual functioning of his imaginative thinking or fantasy life.
5. The form and level of his emotional adjustment and maturation.

These sweeping claims do not give separate consideration to important elements which apparently cannot be well understood with the help of a cross-sectional approach, but several recent studies (e.g. 99) emphasise the variability of Rorschach findings in relation to growth changes. The interesting and important question of the relative permanency of personality traits which the Rorschach reveals, has therefore, not been answered yet. Before we can attempt to give even a tentative answer we must attack the problem of projective mechanisms by means of a longitudinal approach which throws light on fluctuations inherent in the personality pattern of an individual. For this a study of the more or less spontaneous expressive trends in indispensable.

Experimental procedure and research have attacked this subject from many angles. On the one hand we have specific test procedures which gave limited clues to the relation between the perceptual faculty and spontaneous expression, for instance when the subject is required to draw from visually perceived configurations. All these have probably their basis in the "Gestalt principle." One of them, Bender's Visuo Motor Gestalt Test (13) requires the reproduction from memory or by copying of certain complex designs derived from the Gestalt Figures of Wertheimer. The primary purpose of this test is to give clues to disturbance in apprehending configuration and size, as shown by alterations of designs through displacements of parts or simplifications of structural wholes. A test using visual part images was developed by Wartegg (111)), who viewed the problem of spontaneous expression only partly from the Gestalt angle (in its narrow sense) and partly in relation to the subject's innate drives to respond to these part images. Eight simple structures are presented to the subject who is asked to organise a new configuration from each. Paulsson (86) employed ink blots to establish the nature of the stimulus which directs a person to draw a specific kind of pattern through association by similarity. Similar procedures with Rorschach cards have been used by other workers (66).

There is still <sup>a</sup>wide gulf between the above and those approaches which primarily aim at evoking the feeling content derived from inner organisation, in terms of spontaneous pictorial expression. Here verbalisation, is at least one important organising factor. One method is to ask the child to draw the best known things in his environment, the house where he lives and the people in it, and then make him elaborate about these. It was first described by Appel (8) for eliciting unconscious drives and attitudes. Often the resulting material becomes more meaningful through significant omissions that contrast strongly with the child's real environment. But these are primarily a pointer to the kind of phantasy with which a child is preoccupied. To go deeper we must learn something of the content and function of this fantasy. Griffith (47) made a comprehensive study of this aspect by a method which employed, amongst others, the use of ink blots in combination with spontaneous drawings. The author's researches suggest that fantasy, at any rate during the first half of childhood, exerts a controlling influence over the child's development, because it is not only the expression of a temporary need, but a continuously reintegrated pattern that reveals itself in the later decades. She considers that the function of fantasy is to resolve problems initially perceived at the conscious level. This integrating process goes through

through stages of "whole solution", each of them experimental and provisional but gradually approaching through further objective contacts a more socialised attitude. In turn this has a profound influence over intellectual development. Like other workers, in particular Luquet, she refers to the phenomenon of fluctuation in graphic expression, possibly more pronounced in the backward child but present to a varying degree in all. Bearing this mind Goodenough's point scale for measuring intelligence from one single human figure drawing especially in the retarded child is not fully convincing. For example a girl, quoted by Griffith, with a chronological age of 5.1 and a mental age of 3.10, showed in the course of 20 days a fluctuation in her mental age between 3.9 and 5.6 when scored by the Goodenough method. This kind of, by no means uncommon, phenomenon makes one ask whether intellectual factors as such can really be separated out from other aspects of personality in the spontaneous drawing of young children.

It would be interesting to see if the spontaneous human figure drawing could be extended to the objective study of personality disposition in general for instance through the child's ability to project into his drawing aspects of psychosomatic functioning, but such a method has not yet been fully developed. If used as a one stage test procedure it would always lack information

about the type and degree of fluctuation which has never been clearly defined though it is itself an integral feature of spontaneous expression, which should first be studied. Brill (17) and Berrien (15) have used the Goodenough scale for the assessment of adjustment in children and claim in their studies that they can discriminate through analysis of items. Springer (104) on the other hand, whose investigation is on similar lines, discounts their findings. Elkish (30) summarises the reasons why the determination of adjustment and maladjustment as far as it is based on the Goodenough scale, encounters handicaps. They are related to the set up of the test in which the subject is confined to a directed task, to the use of one drawing only as basis for interpretation and the absence of the child's recorded association. "These may be compensated for, if at all, only by a large number of subjects, i.e. by statistical treatment. But if the findings can be reliably expressed only through great numbers, they fail to give insight into the individual case." In a recent book, Machover, (79), uses the body scheme drawing for projection responses in adults. She describes this approach as a "method of personality investigation", but says later that "research in the direction of validation and clarification of of principles through study of individual drawings is in constant progress" and "For a general study underlying



body image contrasts it would be valuable to compare the drawings of dancers with perhaps those of architects and engineers, the body image of surgeons with that of psychiatrists". Her criteria are in part formal and objective, in part based on psychoanalytic concepts. The term "projection" is used very widely and often there is the tendency to generalise from isolated findings, as for example, "full bodies with tiny, wasted, thin or shaded legs are seen in the drawings of the involuntional or senile individual, as an expression of feelings of decline or deficit. In adult male drawings, showing other evidence of sexual disturbance, shading of legs or delineation of legs through transparent pants, adds evidence of homosexual panic." The author believes that projection through the human figure remains constant and that a single drawing therefore is adequate. As very little reference is made to childrens' graphic products this is, presumably chiefly meant to apply to adults and adolescents. In reading such statements we must once more emphasise the importance of finding objective criteria for studying the dynamics behind individual graphic behaviour. That this is possible has been shown by the work of T.S. Waehner (110) on adolescents. Her investigations, published in 1946, deal with the interpretation of spontaneous paintings done by college girls on suggested subjects and subjects of their own choice. From the total material she selected

groups of objective factors which were later used for re-checking each individual product. With the aid of these she obtained character sketches which were matched against teachers impressions of the girls and against blind Rorschach interpretations. Her data, although not quantitative in the accepted sense, showed a high enough validity to warrant attention. Her method involved in its early stages a good deal of painstaking cross checking in the endeavour to preserve its flexibility until an impression of the total material could be gained. In adults where primary painting trends have become further differentiated this is obviously a complex procedure.<sup>1</sup> An approach of this kind, though not done in a psychiatric setting, brings clear evidence that pictorial elements such as content, style and form can be subjected to a far reaching analysis not inferior in validity to the Rorschach Test. Waehner's interpretations, however, were based on single productions. A serial analysis would have enhanced its value to a considerable extent. For the clinician in psychiatry and also for the psychologist it would be helpful to reach a deeper understanding of projective mechanisms by making use of

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1. Murray (Personality p.687) believes that "the method of accumulating considerable material and suspending judgement until the total impression is clear, actually makes for higher reliability in many situations than the summation of piecemeal items which give a misleading appearance of objectivity.

the subjects spontaneous and natural creative activities instead of developing new and more abstract techniques designed for the measuring of single features. Testing methods are expanding at an incredible rate and emphasis has increasingly fallen on so called diagnostic procedures, in which the psychologist is preoccupied with measuring isolated traits which may be only relatively constant and at times even reversible when looked at from the viewpoint of continuity. Frequently the tester is disinterested in or ignorant of the causation of mental symptoms and the therapeutic implications of fantasies which become revealed through mechanisms of identification or projection. Commonly he may be unable to assess the degree to which the child's responses have become coloured by relationships with the person of the tester in test situations. If we postulate that there <sup>are</sup> personality constants on the one hand and responses that fluctuate as the result of extraneous variables on the other, it is reasonable to assume that both perception and expression integrating various levels of personality, would show many of these. If this was true it would be desirable to elucidate what is actually meant <sup>by</sup> "projection-response", which in some of these techniques seems to bear little or no relationship to the mental mechanisms of projection as originally described in psychiatry. (53). The term as applied to these varying procedures lacks scientific

validity and is commonly used in a haphazard fashion.<sup>1</sup>  
Recent summaries (10.9) on projective techniques have stressed the need for giving more detailed attention to subjective factors and also for shifting the emphasis on to developmental aspects of personality.

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1. Eysenck in a very recent review (Recent Progress in Psychiatry, 1951) suggests that the term is a bad one and should be dropped altogether. Instead he puts forward a classification according to the type of stimulus and reaction, the method of response, scoring and interpretation of score, and the mental mechanisms used. Owing to the considerable overlap this purely descriptive division does not help much in clarifying the very confused term "projection mechanism". This term has a real, although much more limited application, than assigned to it by present day psychology. It should be restricted to free-expressive and interpretative procedures which offer the largest possible scope for spontaneous projections to become revealed. The specific significance of this term in relation to graphic structuralisation is discussed in

c ). THERAPEUTIC APPROACHES

Anastasi and Foley's "Survey of the Literature of the Artistic Behaviour of the Insane" (7) contains few references to children's products. These are mostly of a general nature and embody little detailed study on the utilisation as a part of treatment of spontaneous projections from graphic sources. The early papers of Nolan Lewis (72) give a lead in this direction. Lewis writes, "I am convinced that this important avenue of projection has not received due consideration from the standpoint of research in Psychiatry, i.e. it has received more academic attention than direct application to the problems of the individual patient." He emphasises a need for special techniques of interpretation, stressing the unconscious factors which play a part in the creation of symbols through spontaneous drawing. The recent studies of Naumberg (84) follow the lines suggested by Lewis in so far as they apply psychoanalytic mechanisms to the interpretation of isolated products. The work, carried out as a research-project at the New York Psychiatric Institute, up to the present only deals with 6 children who during their stay in the Hospital also attended a psychiatrist. During this time they came to the author's "individual art sessions", where they were asked to produce spontaneous and suggested drawings and then encouraged to talk about their emotional difficulties. The case material was selected



entirely on the basis of conduct disorder, as the writer apparently thought that her method would be most applicable here. In the treatment accounts "the gradual projection of the patient's anxiety into changing art forms is related to fears and threats of a restrictive environment." The descriptions are detailed and interesting but one misses an analysis of the structural elements expressing these changes. It appears also that in some cases the art sessions were supplemented by sessions with a psychiatrist in a common therapeutic effort. The author's interpretations frequently refer to the transference situation, but it is not entirely clear to what extent this related to herself. Again it is not always clear how far the projections were spontaneous and unsuggested. Nevertheless, this useful study opens up one possible avenue for the combination between supervised art-work and playtherapy. Similar trends are shown in the few single case reports which have come out of child guidance work in this country (29), (80), (91), but almost everywhere there has been a one sided emphasis on drawing content with little or no reference to structure and selective colour use.

The claim that the first drawing in a series may be of greater significance than succeeding ones is made by Dolto-Marette (28) who describes the manner in which graphic expression may be used in the psychoanalysis of adolescents to show the individual's feelings about object

relationships. She lays stress on the profound influence of immediately lived through experience on projections through this medium.

Approaches on more objective lines are suggested in various papers of Bender (11), Despart (26) and Harms (51.52). Despart's investigations especially have an extensive clinical setting and deal with supervised and unsupervised drawings. Criteria for assessment are largely based on definitions derived from Eng, Goodenough, Luquet, Rouma and others. Group distinctions are postulated between psychotic and neurotic children with the help of these criteria and the author discusses the uses of drawing as a means to motor expression, catharsis, investigation and therapy. No detailed analysis of serial elements in the treatment process is given nor is <sup>there</sup> any reference to colours. (More) up to date this is probably one of the most comprehensive studies.

For many who are actively concerned with treatment the relation between interpretation and projected material is not always easy to understand. There is the basic difficulty in fully grasping the stages by which a child's associations and projections are suddenly turned into seemingly significant material that is later handed back to the child when the therapist has given it a further meaning. As an illustration, reference is made to an aspect of psychoanalytic literature, where the material for interpretation was based on graphic symbolisation.

Melanie Klein (62) describes graphic material obtained from a boy aged 10 who was treated by her. The way such drawings are arrived at in the first instance and later become analysed by the therapist raises several important questions. In the course of his analysis he made a short series of unsuggested drawings which were crayoned in. Most of these are in the form of abstract patterns, as are not uncommonly done by children of this age group. Through the medium of line and colour the child then brought out certain polarities and gave certain associations with opposing colour tones of red and purple on the one hand, and blue and black on the other. A further step was that these associations contained opposing feeling tones (good and bad) and through the selective colouring of areas this was brought in line with his feelings for his parents and finally with the actual shape and function of genital organs. The link which initially led to the association of good and bad was brought about by the boy describing these colour fields as "maps" of some sort or "countries". Associations with them apparently invested his own aggressive fantasies with a meaningful content which the author describes thus, "it expressed his anxieties about his mother's body attacked by the bad Hitler-father, (bombs, thunderstorms, poisonous toadstools...) the whole empire represented his mother's body and was pierced by his own "bad" genital. The piercing however, was done

by three genitals, representing three men in the family, father, brother and himself. We know that during this hour Richard expressed his horror of sexual intercourse. In this drawing his mother (blue) contains the bad men, or ultimately their bad genitals, and her body is therefore endangered or a place of danger."

It seems that in a case of this kind fantasy release must take place in the child's mind through a constant re-interpretation and clarification of these object attachments to which the therapist directs him. But here some elucidation is necessary of what actually constitutes "projection". If unconscious material is manipulated in such a way in relation to graphic expression, an artificial constancy in a series of drawings may often be arrived at, which might not spontaneously arise out of the child's own world. The spontaneous emergence of graphic symbols, not in response to interpretation of any kind, was recently described in another paper by Harms (50) which deals with the treatment of a schizophrenic boy. In it the author makes the following statements: "for our purpose it is unessential whether these drawings are made by a child of five, ten or fifteen years of age, whether the child is of Negro, Jewish or English descent, whether his capacity for formal expression corresponds with his natural age." Here then, we have an approach which discounts maturation altogether in

favour of a collective experience considered to be at the root of dissociated personality. The author relates the emergence of a type of graphic symbolism, thought to be medieval because of the recurrence in it of so-called alchemistic patterns, the release of which coincide with remission of the schizophrenia.... "His mind became clear almost immediately after a therapeutic situation with regard to his symbolic process was established....

A study of such concepts reveals that the drawing of a symbol calls forth the subconscious forces concerned... After I had helped him to work out his alchemistic transformation, what emerged was a re-awakened modern consciousness, as had been before his mind had become darkened."

All these are ways in which pictorial expression has, more recently, been incorporated into treatment. With regard to therapeutic adequacy the reading of many of the aforementioned investigations leaves one in no doubt that release or detensioning mechanisms are considered the key to such a creation of pictures. Despert uses the term "catharsis" and Naumburg looks upon drawings as containing disguised unconscious elements which may be released through verbalisation provided they are interpreted along recognised lines. But release, the process which brings about a lowering of existing tension, must operate in every type of successful therapy. Although we may be able to explore to some degree the



child's feeling content, or interpret to him in terms of libidinal drives or object fixation, we are still unable to adequately explain thereby remission-phenomena in terms of cause and effect. Strict interpretative techniques really appear to be a continued retesting of psychoanalytical mechanisms on the therapists part, but for the present hardly more than that. A natural constancy of associations in serial products, on the other hand, may often give insights of a specific and personal nature to the child who creates them.

SECTION TWO.

STUDY OF AN INDIVIDUAL PAINTING SERIES.

(with colour microfilms)

## 1. BASIC CONCEPTS AND CRITERIA.

Anastasi and Foley conclude in their survey (7) that graphic productions could serve as a reliable index of personality traits only in those children who show bizarre or unusual representations in conjunctions with the extremer forms of disorder. (Schizophrenia, mental defect or post-encephalitic disturbance). In their search for criteria earlier investigators have, therefore, mainly relied on classifying procedures related to psychiatric diagnostic grouping. Similar criteria for the appraisal of paintings from neurotic children would completely lack validity. But even in the extreme disorder the tendency to use isolated concepts, on the assumption that these could express known deviations from a norm, has inevitably led to a neglect of those primary graphic components from which any deviations must originally have sprung. Hence it is obvious that in an investigation of this kind altogether different types of criteria must be sought if we wish to base our findings on something more than intuitive judgments. My aim was to test the often made assumption that children's paintings have discriminative value both for diagnosis and therapy. In attempting to do this, it became necessary to employ objective approaches in combination with the subjective therapeutic ones which had at the same time to be sufficiently flexible not to

change treatment into a mere test procedure. In my search for criteria I have initially given consideration to the following four general principles.

1. Criteria must bear some relationship to the child's conceptual world.
2. They must take account of what is known of the general trends in the development of graphic expression.
3. The child's intellectual capacity must be considered.
4. Relationships between graphic structure and pictorial content should be demonstrable.

It became clear from the outset that the initial step in such an experiment must be concerned with an empirical study of a considerable number of serial paintings created under conditions providing for sufficient spontaneity yet allowing for some degree of control.

When looking at paintings from many children placed side by side, even the most casual observer will notice characteristics that deal with the placement and structural appearance of objects in them. Categories of objects obviously vary in their range with the child's age. At five years for example there may be perhaps from 5 to 20 different ones, these increase with time until by the age of, say, 12 there may be anything from 50 up to 100. Yet in contrasting serial paintings from two children of similar ages we may, therefore, find that in one series there is a large variety of content while in the other one the same objects perpetually reappear, although both children seem

to be genuinely interested in painting, have similar 'mental ages' and possess an equally good verbal facility for describing what they see in the world around. The recognition of the outer world, its affective meaning and the process of spontaneous expression, each receive a different emphasis. On closer comparison qualitative as well as quantitative differences in other aspects of the painting process are no less striking. One child, for example, hardly ventures to move when handling the brush, his pictures in turn assume a static quality as though cut out of wood. Another finds greatest pleasure in rhythmic movement and makes his brush strokes merge into one another. Many children scarcely give a thought to the limits imposed by the painting page, while others carefully avoid to overstep its margins. Some children superimpose colours, building them up into space as it were, others again become flustered if colours intermingle and try to avoid this at all costs.

Such and many equally striking examples merely illustrate how any individual will invest the painting process with a specific personal meaning which sometimes reveals tendencies that appear to be extreme and exaggerated. For a systematic study of these characteristics we will have to direct our attention to the separate steps through which painting patterns are built up. In doing so we endeavour to isolate certain primary elements



which can be shown to appear in the pictorial expression of all children.

The method of analysis used throughout the investigation was developed by means of serial observations on several thousand paintings. This material was derived in parts from "non neurotic" children attending nursery and primary schools, and in part from children with various types and degrees of emotional disorder who received treatment in the Child Psychiatry Unit of Guy's Hospital. A number of psychotic children were also included. For the evolution of primitive structural tendencies a number of children between the ages of 2 and 9 were included in the study. In addition reference was made to earlier longitudinal observations and group assessments. (5. 30. 31. 47. 65. 74. 76. 89. 92.)

#### Stroke Behaviour.

Any method designed for observation of stages must initially give careful attention to the painting process itself. The use of painting media that allow for the assessment of completed products has been discussed earlier with reference to powder paints which, on the whole, tend to show up the kinetic elements of painting more readily than relatively less coarse materials. For an analysis of most serial phenomena, but especially the constancy of colour choice, numbering of the main steps immediately after completion of a painting is helpful. With more

complex patterns, for instance where the initial steps have been obscured through overlay, stages can be recorded on a separate sheet ( ) while the child goes on with painting. The term "Stroke Behaviour" is used with reference to the degree and type of motor control which the child exercises when handling this brush. It predominantly reflects the kinetic elements of painting. In very young children it is largely based on factors pertaining to manipulation and muscle control. Later its graphic or pictorial equivalent may become increasingly conditioned by emotional factors.

#### Emergence of Structure and Formal Criteria.

The underlying concept for these is initially derived from empirical observations of the painting behaviour of a group of 10 children between 2 and 4 years of age seen during 1948, who were of at least average intelligence. These children had never previously used colour media and their verbal associations were of necessity more limited than those of somewhat older children. The most primitive and initially isolated graphic components could, therefore, be traced back through the more complex patterns seen in their later paintings. Very soon it was found, when contrasting a short selection of their paintings, that it was possible to discriminate between certain personality traits shown by these children.

From previous studies along similar lines (5), (31), (42), (65) we know that at the age of about three a child of normal intellectual ability will reproduce as well as create single or multiple basic form elements of a vertical, horizontal, circular, angular or wavy tendency. By means of his typical stroke-behaviour he will spontaneously combine some or all of these into patterns which are never quite like those of any other child. It is this way of organising meaningful (at his level) patterns from isolated components, and the degrees of continuity and discontinuity in them, which primarily interest us. When analysing these patterns, it could be seen that they were related to a relatively small number of isolated components which collectively entered into the process of painting. Extremes emphasis on some of these components would in time convert these into actual traits that dominated the resulting design. As mentioned before some of these are essentially kinetic in nature e.g. the degree of pressure applied to the brushstroke, the speed, range and accuracy of to and fro movements and the nature of line - or mass effect arising therefrom. Others are clearly linked to the mental set of the child at the time of painting e.g. the degree of his dependence on the basic form elements, his ability or lack of it in synthesising these, his colour selectivity in relation to structure and his persistent emphasis on line or mass when colours are brought on to the page. Furthermore,

there is a relationship between the process of filling form into surrounding space and the amount of repetition which enters into this kind of activity.

When these and similar trends were observed it was decided to investigate systematically the child's mental and emotional qualities and reactions in terms of these basic graphic elements and see how far they could be applied to separate aspects of the painting process in a whole group of 40 children. A definition along operational lines is given in Section III where this group-experiment is described. In this section an endeavour has been made to illustrate the emergence of these trends in an individual treatment case and quote a number of possible interpretations which have been offered by other workers in the context of general painting trends of this type at the child's age level. These must not be taken as necessarily applying in a diagnostic way to this child.

Associations with Graphic Structure. As Krötzsch and others have demonstrated an intricate relationship exists between graphic expression, early language development and concept formation. The stages by which unstructured concepts become gradually transformed and differentiated into meaningful and comprehensive ideas is strikingly illustrated in many of the developmental investigations. These have also shown what a large part fantasy plays in the process of rising from a less structured to a more structured level,

and how it deals with impressions from the outer environment by means of selecting those which are most appropriate to his present affect.

With this in mind an attempt was made to explore the links between graphic structure and thought content through the medium of verbal associations evoked at treatment sessions. In doing so I started out with no preconceived notions and with a full realisation of the relative inadequacy of approaches for a deeper understanding of spontaneous expressions at my disposal. Nor was the method assumed to be a kind of "projection test", in thinking that every verbal response must necessarily be of deep significance or could be related directly to the child's disorder. Through increasing experience, it became clear that many associations with drawings represent nothing more than a passing interest of the child, or illustrate in various ways his attitude to reality. Yet, as the research progressed, there were found to be striking differences between different types of associations given by the same child. Not only did these differences reflect on the content of paintings, but they also showed degrees of relative stability or lability. In other words, the fluctuations revealed in these responses were not unlike the fluctuations shown in the paintings themselves.



The first step therefore was to clearly define the terms "association" and "projection" for the purpose of this study. In Section I.3, the importance of verbal associations has been stressed. Their employment as a standard procedure during treatment often made a great deal of verbal material available which could be retrospectively evaluated in relation to painting series. Frequently a much larger part of interviews was taken up with elaborations of such responses than with the actual painting. As the nature of these associations was such a varied one their function in revealing mental content was sometimes far from clear.

For this reason every type of response was viewed from the outset as nothing more than an association. The term "projection response" was employed after these associations had been compared with a number of similar responses from the same child. It was therefore restricted to certain distinctly personal as well as spontaneous elements which emerged when structure, colour and verbalised content were seen in conjunction. Such specific responses frequently showed an unduly high degree of stability throughout the series. The total material of verbal associations from these 40 children was analysed for recurrent features of three types.

- 1). Their relative constancy was viewed against the background of manifest fantasies, phobias, dreams, overt attitudes and reactions within and without the playroom.

- 2). Their relationship to colour and structure in the paintings was studied.
- 3). As all the children showed a persistent and often disabling somatic dysfunction, their feelings about body functions and illness were related to these associations and to certain recurrent form elements. (this aspect is described in greater detail in Section III).

### Exploratory Conversation.

The researches of Piaget and his co-workers on the conceptual development of normal children has abundantly demonstrated the value of directive non-suggestive and non-interpretive questioning in relation to simple set experiments. A method similar to his, but adjusted to the requirements of therapy with emotionally disturbed children, was adopted here. The child's initial spontaneous response was first awaited, after completion of the painting. If questioning became necessary in relation to his response, this had to be vague and at first generalised. Later questions had to take advantage of the child's previous answers. This method is illustrated by the verbatim associations of the various children. These have been selected from the original treatment records, which are more detailed and often contain repetitive and irrelevant matter. The responses included were therefore selected on the basis that the given association was

- a). either the initial and most spontaneous response to a finished painting on the day it was painted.
- b). or a persistent and significant association in the context of the child's emotional disturbance.

c). A retrospective association given after one, three, six months or one year. In many children this proved to be of value in testing the "fixity" of earlier responses.

## 2. CASE ANALYSIS.

The following case of asthma (no. 15 of the group) is reported in detail to illustrate the serial painting method with the aid of consecutive colour transparencies.<sup>1</sup> (Appendix I). These microfilms have been taken from the child's progressive series during a period of 12 months, commencing with his earliest products<sup>2</sup> and ending at the time when treatment was terminated. The child has been followed up over the last 18 months.

History. The patient, a boy of  $5\frac{1}{2}$  years, was first seen in autumn 1948. He was brought to the Clinic by his mother after a succession of three severe asthmatic attacks in the course of one week. Each of these had occurred in bed during the early morning hours preceded by laboured breathing which started on the previous evening after a violent quarrel between him and his elder brother aged ten. The mother gave this description:

"Edward (the brother) always provokes him at night and slowly works him up into an attack. Of course Tony (the patient) is himself full of mischief and never knows how to play alone. He starts to interfere with his brother who is just waiting for a good bust-up. Once the scrap gets

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1. When examining these films it is best to hold the sheet in front of an X-ray viewing screen, as both colours and structural elements are then fully equivalent in quality to the originals.

2. i.e. after he had become conversant with colour media.

under way he goes completely off the handle, smashes cups and plates and becomes a danger to everybody. In the end the two will have to be forcibly separated. This is always the worst moment because T. throws himself on the ground and starts with his breathing. After he is finally got to bed he will sleep almost at once until the morning when his attack begins."

The previous history of his illness may be summarised as follows. When seven months old he developed an eczematous condition of his face and soon afterwards had his first, rather severe, attack of breathlessness. Asthma, usually nocturnal, continued at twice weekly, weekly or fortnightly intervals throughout the course of the next four years, until the psychological aspects related to the precipitation of attacks became investigated. On two occasions, during the winters of 1945 and 1946, he was admitted to hospitals with pneumonia. At the beginning of April 1947 he became an in-patient at the Royal Chest Hospital for a full medical and allergic investigation. Skin tests there showed sensitivity to pollen and house dust. He was given a course of desensitising injections and had his tonsils and adenoids removed. Six weeks later he was discharged as there were no further signs of asthma. Asthma started the night he reached his home. An X-ray of his chest, taken during July 1947, was in every respect normal. For a period of almost one year from then onwards he attended his private doctor who put him on ephedrine and continued with the desensitisation. No significant change in frequency or severity of his attacks resulted from this



line of treatment. Some of his more recent attacks had, in fact, been more prolonged and on several occasions he was made to stay in bed for over a week.

#### Development.

Tony was a normal birth with a birthweight of 6lbs 8 oz and was bottlefed after the second month. His early development and his milestones were described as normal. Throughout his first five years there were, apart from hospitalisation, no serious environmental upsets.

#### Family History.

The patient's father who owns a flower shop has hayfever during the time when mimosas are being sold on the market. His maternal grandfather died of pneumonia, having suffered almost all his life with bronchitis. There is no known case of asthma in the family and no history of nervous or mental illness.

#### Disposition and Behaviour.

Tony was very much wanted, but the parents had hoped to have a girl for their second child. During the later war years the family moved away from London to stay with paternal relatives in the country. Here the boy had numerous outlets and was well looked after. At this time the father was away in the army but, as he was stationed in this country, he could come home for regular visits. T's mother has high maternal standards for the two brothers but she lacks firmness and has been inconsistent in the

handling of their relationship. She still regrets that T. was not a girl, "because then," she once said, "he would not have been so difficult and perhaps would not have had his asthma." Her attitude to him was, thus, different from the outset, when she displayed a tendency to give into him easily and make him the object of special care and, at times, favouritism. There was at first some dissension between the parents about him but later the father was too much occupied with his business and the mother's more lenient approach gained the upper hand.

As a baby T. is said to have been most affectionate. When at the breast "he seemed greedy and would never stop sucking until he went quite blue in his face." Her reason given for terminating the breast-feeding was that "he could never get satisfied and I hadn't enough milk, so the doctor told me to let him have a bottle." She seemed gratified and relieved in finding that his appetite had remained the same afterwards. Later, when he developed his facial eczema he became much less responsive to affection. He began to show signs of tension, being at times exceedingly hyperactive, at other times lethargic and withdrawn. Seemingly no extrinsic emotional factors contributed to the first asthmatic attack which took place after an evening feed. He was more irritable on the days preceding it and had vomited several times in succession. Although the actual paroxysm must have been <sup>of</sup> a relatively short duration he was

so dysnoetic that he had to have oxygen. During the following two years he became more and more demanding and, the mother thinks, mischievous, through attempting to dominate the household. This in turn reflected on his brother who thought that Tony should be reprimanded for his behaviour. After the father's homecoming the atmosphere became at first a little more congenial, but the mother could not bring herself to relax in her natural anxiety for his safety. All this was understandable, for she is a warm hearted woman and T.'s often rather severe attacks must have distressed her. Generally speaking it would be inaccurate to consider her as either grossly over-protective or abnormally anxious such as one not infrequently finds amongst the mothers of asthma children. With the regular phasic occurrence of his attacks she has gradually been able to relax in her fears for his health, although she is still inclined to favour him too much and make it easier for him to dominate the scene.

The intense rivalry and quarrelling between the two brothers began as soon as T. had started to take a more conscious interest in his environment and it reached its climax at the time he was about four, when some of his pronounced personality traits assumed a more distinct pattern. All informants reports, from parents, school, other children as well as observers at the Clinic were in agreement that on the negative side his most outstanding

feature was an increased irritability and exciteability, often in presence of marked motor restlessness. Very trivial matters could throw him off the balance. The resulting reaction was invariably that of domineering or aggressive behaviour towards other children, whereas with adults he showed avoidance, lack of self confidence or negativism. On the positive side he had periods of self assurance when he could be most co-operative, outgoing, kind and generous. But even, or perhaps especially, in these situations he became easily over-stimulated and rapidly inclined to be assertive and moody. This was exemplified by his reactions during the early interviews at the Clinic.

#### Psychological Examination.

On testing with formal intelligence tests (Terman Merrill Scale) he ranked above average with an Intelligence Quotient of 117. on performance tests (Alexander Scale) the results were slightly lower. His projection responses with the human figure drawing will be commented upon in Section III, in connection with associations to this drawing test. When his drawing was scored according to the Goodenough Scale he reached a mental age of 5 years 6 months, which would give him an I.Q. of 100. There was, thus, a difference of almost 20 points between this and the Terman Scale. During part of the testing he would not leave his mother as he was afraid of being kept alone

in the hospital, but when she was present he worked independently and with a certain amount of pleasure. He was manifestly more at ease with a female stranger than with a man. Certain test items, particularly verbal ones, were refused with great determination.

Painting Trends, Reactions and Symptomatology during early interviews.

Descriptive accounts of serial productions painted in the course of treatment are now being presented. The first example (No.1 see Appendix, Table I), was painted in the course of the third interview and the child soon showed considerable interest in experimenting with the available colour selection. This task he approached with a certain amount of concentration, more so than any other activity so far observed, although his initial painting behaviour was clearly dominated by marked tension. After a minimum of instruction he asked to be left alone and, like the majority of young pre-school children in this group, he persisted with using the largest available brush.

Stroke Behaviour.

Painting commenced with yellow, a choice apparently not determined by the position of this colour in the tray; it was situated in the row of colours furthest away from him. The start was made in the upper right corner of the page with careful and deliberate horizontal to and fro movements, interrupted suddenly in order to transfer his



brush to the centre of the base line. Here he continued with short vertical up and down strokes. To neither of these much pressure was applied. His second step was a choice of blue, a colour next to yellow on the tray. He applied this above the first yellow mass, again with parallel horizontal strokes, then continued vertically downwards until a distinct line separating the two yellow areas was formed. He endeavoured to keep all the colours separate and after the second stage some falling off in attention became noticeable. When selecting green and red for filling-in the outlines on the right half of the page, he once more employed a predominantly horizontal or vertical stroke direction. Finally he smeared black into the centre of this fenced off section, thereby obliterating some of the lighter colours.

On the left half of the page he painted a similarly enclosed area, filling its centre with a diluted black. When asked, "What is it?" or "what does it mean" he described it as follows,

- (Al. "A wood (enclosure on the right) "that's where all the old people live who cut down the trees... The trees are all dead now because they get their food from them. There is a fence round the people to stop them from getting out of the wood." (who lives outside the wood?)) "All trees."  
1m. "A very big wood."  
3m. "A wood with lots of people and animals, they are looking for food."  
6m. "The thing at the right is somebody's house, but nobody lives there just now."  
ly. "It's some sort of a pattern."

In their initial associations patterns N.1 to 4 had a similar basic concept. They all represented a wood, but this wood gradually changes in some important respects. Whereas in 1. it is distinctly divided, in 2. the stroke elements are much more vague. In it a black splash appears. Before he painted this he said, "Now I am doing a dog." This animal later assumed a definite meaning. With No. 3 he discovered that structure stood out more distinctly on white ground, hence the lessened concern for "page filling". More detailed associations were given here.

A2. "Two different woods, (the left one) there is one tree that becomes always chopped off and you can never get it on again.... A man is there on the other side, he chops it off. He is a green man and chops lots of trees because he is bad.... I also chop trees sometimes... But this tree (on the right) is never chopped off". (Why?) "It belongs to him."

1m. "Two big trees, one has been chopped off."

3m. "They are chopping trees there."

6m. "It's a funny kind of garden, with some funny trees."  
ly. No response.

One week later, after completion of No. 4 his associations suggested that the green man was also in No.1 and that the wall was put there to stop him from cutting trees on the other side. While painting No.4 his stroke movements were much more relaxed. This was shown by the greater expansiveness of his strokes, which brought about a fusion of horizontal and vertical trends. The whole page here was filled with brown, a colour so far little favoured. Low down, almost centrally he attempted (for

the first time in paintings) to make the shape of a human body, mixing together black and yellow. But as soon as the mere outline was completed he began to over-paint it from below with black. Then to its left he placed a small red mass (Difficult to see in film). Once finished he placed a black finger-like structure immediately beside it.

A3. (The red thing) "is the little boy's doggie. They are in a garden with lots of trees and the boy is looking after the dog. It's all being covered up now because the boy doesn't want anybody there. He just went out and fell down. He got all covered up in snow. The dog doesn't like the boy any more, but it was really a nice boy and they buried him."

1m. "There was a boy and a dog. They went into the wood and the dog got killed by the woodman. So the boy had to dig him into the ground. The woodman tried to get the boy, but he got away."

3m. "Don't know, it might be in a garden. There is somebody in black."

6m. "A brown field with a tree."

ly. "A piece of brown paper crumpled up."

These initial responses expressed vividly and, in a more overt manner than hitherto, his feelings about himself. At the same time a new trait emerges, of which this is the first example. It is over-painting or "overlay". The trait is no longer prominent in the second half of the series, i.e. after about 4 months. It is interesting to note that his attention to the black area also disappeared around that time. In this and some later products the overlay was of a selective kind, i.e. it attempted to conceal structural elements which seemed emotionally important.

Further important changes in form and content appear with the following patterns (5 to 7). We observe the gradual emergence of isolated and differentiated elements, first close together, later more separate. His previous mode of space control is largely maintained especially in No.7. where the enclosure pattern on the right closely resembles that in No.1. We also note a change over to more intense colours. (red, mauve).

During the treatment phase in which these paintings were created, (it covered the second month of clinic attendance) he became for the first time free from asthma attacks for something like three weeks. At the Clinic his previously rather standoffish behaviour began to change very gradually, although there were still angry outbursts and temper-tantrums at home.

No.5. presents a large variety of shapes and colour. Mauve in particular finds emphasis in association with black. Red is used similarly. The pattern was once again commenced on the right. (He made the "artificial frame" first.). This painting, coinciding in time with a remission week, was his first consistent effort in realistic painting. Previously he had shown some resistance to painting the human figure (although he was quite able to draw one. See III.3.). The whole pattern too is integrated in such a way that a more realistic meaning has been conveyed to the observer. The painting was called

"a family", although there are indications that this is not an ordinary kind of family.

A4. (The mauve mass on the left) "is a house with three chimneys" (the black patch below it) is "mother sitting inside". (To the extreme left is a red figure) "daddy, he is just coming in" (while away to the right and far from the others is another standing male figure) "he is the boy with a big brown head". (Between him and the house there is a fourth person, but him he would not paint spontaneously but he asked the therapist to cut the shape of a person out of cardboard and then he traced it through this) "He is also a boy"... (A large number of spontaneous associations were given here)... "This boy" (to the very right) "has a big head, he put it on him, because his head was chopped off" (Why?) "Because he attacked the other people, he wanted to kill them" (Whom, all of them?) "the boy first, then the other man" (Who is he?) "The boy" (and who chopped his head?) "The woodman chopped his head off, but he lost the chopper, and now the boy has found it." (What is it for?) "It kills the boy" (And what about the other people?) "They don't like him" (They know him well?) "Yes he lives in the house".

1m. Conversation was almost identical to the above.

3m. "They are all having a fight, but the man on the other side is hiding behind the house and they can't find him".

6m. "This is a family in a house" (Blue chopper?) "It belongs to the man" (What for?) "He is coming from the woods to chop wood".

1y. "Some people sitting in big room" (The "house"?) "the fire place".

These associations suggest that the fantasy figure "Woodman" always comes into action when the boy (himself) is to receive punishment. On this occasion he himself carried the weapon with which he was punished (the chopper). It may thus mean that his feelings of guilt have found here a more poignant graphic expression than hitherto. On the same occasion conversation with his mother revealed that he and his brother were now on very friendly terms. The objectivisation of his guilt feelings was, therefore,



concomitant with some home adjustment.

To what extent he could maintain his improvement is revealed by the next product (No.6.), which, at the same time, serves as an illustration of the phenomenon of fluctuation. Although colour usage is almost identical with 5. the pattern is disintegrated and shows (unusual for him) some orientation towards the left. It was most difficult to disentangle it all and the resulting associations can only give a partial clue to it.

A5. (The central complex, consisting of mauve, green and yellow areas is) "a christmas tree" (The figure to its left) "is the monkey taking the little girl up the tree". (The ring structure on the R. was first called a "balloon" but afterwards he altered this and said) "this is some kind of stomach which has become chopped off" (The chopper can be seen on its R.) (This most unusual response was examined on several occasions, direct questioning being used here).

- 1m. (I can see how they chop trees, but how can you chop a stomach when its right inside you?) "They chop it off too, then hang it up on a string" (Whose stomach?) "It might be anybody's, they always chop stomachs at the butcher's" (Following this he became rather restless and played with sand for most of this session).
- 3m. (What is this round thing up there?) "It's a kind of stomach, they blown it up".
- 6m. (How about this mauve ring?) "It's not a ring it's a piece of gut made into a balloon"
- ly. "Lots of balloons or lights".

In associating an internal organ with the idea of "cutting" and "tying", which in a similar manner emerged from some of his later projections, it is not impossible that feelings of internal constriction are suggested. The location of inner organs at the age of 6 is a vague one and the term "stomach" may include the whole chest-area

up to the neck. "Stomach" is in fact one of the most commonly mentioned organs at that age, apart from the heart. Reassurance and explanation was given in relation to these responses as the boy had shown a good deal of overt anxiety.

Over two weeks intervened between this and the next painting. (Christmas holidays.) As painting had become somewhat of a routine, his attention was directed to other play material. Several times he played with the doll's house but on each occasion when he took the dolls out he called them "bears". This was doubtless related to the fairytale of "Goldilocks" which his mother had then told him. How his fantasy dealt with this story and how earlier ideas of "chopping" or "cutting" became replaced in it by concepts of "swallowing up" or "incorporation" is demonstrated in No.6.

A6. (Within the black enclosure).. "is Goldilocks, she plays with her dogs, When she sees the bears on the outside of the fence (blue dots) she makes the dogs eat them all up". (The mauve basket like enclosure with blue mass inside it was called a dogkennel) "These bears are trying to get through the fence, they are three bears, mummy, daddy and baby bear, but all of them get eaten up when they come inside."

- 1m. "This is a big house, there are some people outside and some inside".
- 3m. "I can't say what this is, it looks like a door to me."
- 6m. "A gate"
- ly. "A round black fence, to keep animals in"

The following three patterns taken together (8.9.10) resemble his earliest phase, but only in so far as there is a reversal to abstract pattern. All three

were painted during a quiescent period when the child had no further asthma and was generally relaxed. Non association with them was given apart from "woods" or "gardens" with the trees "covered up, the blue are the old ones and the green the new ones". His decreasing concern to overstep the margin of the paper is a further evidence of greater relaxation. The resulting colour masses cover a larger area, are not artificially limited and the colours are allowed to intermingle. There is increased fluency.

Period of Progressive Differentiation in Patterns.

Painting No.11 coincided in time with the development of definite somatic symptoms different in nature from those previously encountered. Although in a phase of remission, lasting for almost 6 weeks, in so far as asthma attacks were concerned, he had gradually developed a troublesome cough with much expectoration. An X-ray of his chest taken at that time showed a small collapse of his right middle lobe and owing to the suspicion of a possible tuberculous infection he was admitted to the pediatric ward. Here he remained afebrile, showed no loss of weight but had one slight attack of asthma. Although no evidence of T.B. was discovered it was decided to send him away for a period of convalescence later in Spring. The above painting shows a reversal to his earlier differential space control, this time with much

more emphasis on red and a focus on form elements previously seen (the tree structure). The red mass in the lower left half is called -

A7. "dog running away from the woodman. He hit him and the red is all the blood. (W. like in all the other pictures, remains invisible. He is "on the right side cutting trees" (Their colour has now suddenly become red)..

1m. (In Hospital) "There is a big fire burning, it was started by someone outside the garden, you can see him if you look carefully" (black spot on very left).

3m. "A garden with a hedge and fruit trees"

6m. "It's a sunset"

1y. "It looks like a fire to me, I don't know what it's really meant to be".

Nos. 12 to 16 cover the month when he was in the ward for observation and attended the clinic in the usual way. Compared with the rest, even with the earliest ones, these patterns appear more disorganised and primitive. Yet, at any rate on the surface, reports from the ward suggest good adjustment though he seemed rather shy and withdrawn. He had many disturbed nights (dreams and coughing) but only one short and rather mild attack of asthma. He became demanding when his mother visited.

The most striking feature in all these four patterns is the pronounced emphasis on overlay. Never before nor again did he use it to quite the same degree. (He painted three others in the same phase showing precisely similar tendencies). Another striking feature was that, although associations revealed a great deal of content tinged with anxiety, this content was fundamentally different from the earlier one.

No.12. (Note again the page division).

A.8. "They are building a house here and there is a lot of water coming in, so they have to try and stop it. But it will still come through."

1m. No response.

3m. "A large black motor car. Might be an engine"

6m. "Train going out of the station"

ly. "dirty mess".

No.13.

A.9. "A big pool of water, two women (yellow spots) swimming in the water"

1m. No response.

3m. "Looks like grass"

6m. Disinterested.

ly. No interest shown.

No.14.

A.10. (This painting was begun with the announcement that he was now going to paint something in the country. It started with green, mauve and yellow verticals, probl. "trees", then came a green foreground, finally he did a red "sun". All this was overpainted in black because) "there are many big clouds."

1m. "Clouds and smoke"

3m. "Smoke"

6m. "Smoke and fire"

ly. "Smoke and fire"

No.15.

No detailed associations were given here. The picture was described as "rooms full of water".

No.16. was painted shortly before leaving Hospital. In theme, though not in structure, it differs from the remaining ones in that it stands almost wholly for reality. The brown area at the bottom is "a road", the middle "a river", the background "trees". Again an interesting example of fluctuation.

T. attended for another two months before he went



away on convalescence. All this time he remained free from attacks of asthma.

No.17. is the result of a much longer interview after returning home from the ward. As shown here, his urge to fill the whole page, had suddenly ceased and the interest in human figure representation became once more apparent. From this angle the picture may be viewed as a direct continuation of Nos. 4.5.6.

A.11. (On a blue, green and brown hill described as "house", a figure with "two legs and a long black gun" stands in a precarious position) "He is the birdman, he is shooting his gun through the bird" (on his left).

(Seemingly the most important person stands to the right of the "birdman", he has arms as well as legs, also long hair.) "He is the MAN, his name is Mr. Dog. He really has the gun, because he must shoot at the golliwog (Green figure to right of him). (From then on most associations were given in relation to "Mr. Dog") "He owns the big house in Cavendish Street (his father's flower shop). He is very strong." .....(Shooting?) "He shoots at the golliwog because he fights with the bird".. (Birdman?) "He tries to kill the bird but it flies away"

1m. Associations identical except that "golliwog" and "Mr. Dog" are on friendly terms. "Birdman" is still shooting at bird.

6m. "Guy Fawkes night, they are burning the Guy" (the birdman).

ly. "Some cowboys on a hill"

These responses again fit in to his earlier associations. "Dog" or "Mr. Dog", with whom he so strongly identified stands for himself and "golliwog" for his brother. In contrast to No.5. when he sees himself at the periphery of the family, he has now moved more towards the centre and has acquired greater power. Doubtless his actual position within the family had really become somewhat different,

partly due to the greater amount of attention bestowed upon him as the result of his recent illness, and partly also because of his improved behaviour. Yet his aggressive and ambivalent feelings became once more revealed in connection with the gun symbol. Equally interesting here is the graphic expression of hair as a sign of strength. The "birdman", (his father, who is in fact bald), has been given a gun but not even a head to grow hair on. The association of bird fantasies with woman is significant, because of its frequent interpretation as an archetypal figure in psychology and imaginative writing (Hudson. "Green Mansions").

His actual feelings about parent figures in No.19. are altogether reversed. This is the first painting to give full prominence to form. In it is also a clue given to the meaning of religious experience in young children. For the first time white has been used as an emotionally significant colour.

A.12. (The two cephalopodes on either side of this page are named "God" and "Jesus" respectively. Only very little later the one on the right was called "Dad" and the other one "Mum". The white splash in the centre (hard to see in film) is described as a "very big cat", on its left is a small white daub called "man" and "baby")

These associations remained constant throughout the year. The two figures are an example par excellence of the general scheme for the human figure at the age of about four. The striking feature is that he should, in emphasising clear

form, show this kind of regression, as he was well able to draw the scheme in accordance with his chronological age.

Further progress is shown by the progressive differentiation in structure of the serial paintings 17 to 21. It too arises from the associations given, which more than hitherto employ figures and events from his own reality.

No.19. Here again the element of fluctuation in treatment of the human figure becomes apparent.

A.13. (The white arch with the brown on top is "a church") "My dad here is in church, but he is not married. There are green and red windows. These (green and blue splashes) are trees outside"

lm. (He was struck by the similarity of the enclosure in this painting to the earlier ones, e.g.No.7. and said) "They are sorts of houses.....many people live there, but this house (No 19) only belongs to my dad". (Why does he live there alone?) "He has lots of people to visit him" (Does he always live there?) "He has two houses, one which belongs to him and one which belongs to us all"

6m. "A big white knight"

ly. "A man carrying balloons"

No reference has been made to dreams so far.

His mother had given several dramatic accounts of nightmares, but he could not remember any detail. He admitted that he had often woken up in the fear of choking, but purposely no attempt was made to press him into relating these dreams. With No.20. the first spontaneous revelation about these was given.

A.14. (This pattern consists largely of lines, dots and semi-circles) "The whole thing is a big house full of crocodiles and the brown things are the cupboards where they slip back. I often dream about the crocodiles. They look like little worms and sometimes they become quite big" (Afraid?) "Yes, but only at first, because they are always

pushed back into the cupboards" This pattern produced no further responses after 6 months, after one year he still remembered that it represented a dream.

It is not often that a child of this age gives direct and spontaneous graphic expression of dream experiences. (There are only four other instances, out of a total of about 1500 responses from these 40 children, where this occurred. Some of this boy's other paintings have a dreamlike quality and their content may to some extent have been elaborated from dreams. In attempting to elucidate this he was shown some of these and direct questions were asked. He then pointed to the "golliwog" in 17 saying, "this is a sort of snake or crocodile, but it is dead now." He did not refer to any other painting in this context.

During the following two weeks T. joined a small group of children and was not seen individually. This group was run along free activity lines, the members being grouped in such a way that as a result of certain more pronounced personality traits in them they would have a therapeutic effect on one another. On the first occasion he was markedly provocative and made several unsuccessful attempts in breaking up the group. The second time was very cheerful, full of jokes and on the whole quite a success. At that time he joined the others in painting and No. 21 was the result.

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I.

The problem of using such a group also for diagnostic purposes in cases who are receiving individual therapy has been studied for some years at the Clinic and found helpful as an objective tool in appraising informants reports.

This concentric pattern is included in the series as an illustration of how group painting may alter the graphic behaviour of a child. Fundamentally this is another, but much more stereotyped, "enclosure pattern", with the opaque colours of his type of social adaptation of a rather rigid and impersonal kind made to the group.

### Emergence of Realism.

Nos. 22 to 28 are the final products shown here. These covered the last two months of treatment after his return from convalescence.<sup>1</sup> Owing to the period of separation from the Clinic it might have been expected that he would show further fluctuations in his paintings, but as may be seen 22 joins almost directly on to No.20. From then onwards we have a steady and progressive development with increasing emphasis on realism. This is still slight in 22-24, more pronounced in 25-27, and slightly less pronounced in 28, his first painting from a follow-up visit. Nos. 22 to 24 each contain certain conflicts elements, whose formal expression is also shown through features which have previously signified conflict.

No. 22 (should be looked at in the reverse) is a "foxes house with some crocodiles trying to get in". The green enclosure on its upper right "has the food for the foxes." "The foxes must all be black."

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1. During that period he had been slightly breathless on a few occasions but had no asthmatic attacks. He looked well and happy although his cough was still in evidence. A further X-ray taken in the beginning of September 1948 showed full expansion of his right middle lobe.



No. 23 is "a boat going to Southend. It has run against a boulder. It can't move on."

No. 24 is another boat, "it's out on the sea and it is pulling a huge big rock". (Why does the boat not sink?)

"Because it moves too fast" (But the rock must be heavy?)

"Yes, but the boat is much heavier"<sup>1</sup>. (Why must it pull this rock?) "Somebody tied it on to make it sink and all the people drown." (Who are these people?) "They might be anybody." On further exploration it was evident that he linked up the idea of "heavy" with power and speed and not at all with "sinking down" because of being heavy.

These four paintings coincided with the boy's commencement of school, which led to a number of minor setbacks as regards adjustment, but again no asthmatic attacks occurred.

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1. It is worthwhile to observe in this connection how fantasy and concept-level overlap. Piaget's studies ("The Child's Conception of Causality"; Page 136) reveal a number of almost identical examples in children of about 6 e.g. Vern, a boy age 6, realises that a boat will float but a stone will sink. "Why does the boat not sink?" it is heavier than stone, yet it does not sink?"-- "The boat is cleverer than stone." "Why do rowing boats not go to the bottom?" "Because the movement of the oars keep them up."

### Analysis and Discussion.

Therapeutic Aims. The primary object of the foregoing accounts describing spontaneous paintings in an individual child, was to call attention to certain trends, some more general and others more specific, which are commonly encountered when painting is used as a part of therapeutic procedure.

The method makes, on the whole, no attempt to employ interpretation actively. Possible elements for interpretation are suggested in the child's own world-picture which gradually unfolded itself and can then be studied retrospectively by using the same painting series many times over for the purpose of eliciting further associative responses. This procedure, to a certain extent, also serves as a test for the relative "fixity" of the previous associations.

The main therapeutic endeavour is to activate free expressive trends, especially those which reach out to the child's own environment. It would mean that, as far as it is possible, this type of expression is unsuggested and that the paintings reflect his innate creative capacity.

Serial Trends. The important problem which faces us here is the modification of developmental graphic trends in form expression either by specific emotional conflicts or by generalised anxiety.

During a period of nine months this boy's graphic patterns passed through a number of fairly well defined stages and gradually approached a more realistic mode of representation. The latter occurred around the time when he was  $6\frac{1}{2}$  years of age.

The difficulty of giving valid experimental evidence to the question posed above lies in our inability to establish norms for spontaneous expressive trends of any kind. Yet from the prognostic standpoint it would be important to know in what way an analysis of persistent serial trends could help us in separating those items which are more or less based on development from those which are conditioned by temporary emotional factors. The only method which presents itself for this purpose is the experimental procedure used throughout this investigation, namely that of analysing the relationship between thought-content and created graphic structure by means of spontaneous association.

Amongst the more outstanding formal trends which are encountered in this analysis the following have been given special consideration.

Selective emphasis on Area or Space. This was

particularly striking during the early months of treatment, but the fundamental emphasis on the right side of the pattern<sup>1</sup> 1. This imbalance could imply the graphic expression of an unconscious conflict, the dominant right side reflecting more his overt attitudes, the left one the repressed aspects of his personality. Altschuler and Hattwick's observations suggest that actual handedness in differential treatment of (cont. at foot of next page).

can still be seen in the last painting No. 28. It is most marked in No. 1,3,6,7,11,14,15,22,24. Equally striking is the boy's tendency to paint "enclosure patterns", i.e. to construct within the available space other smaller areas that are tightly shut off. This is most noticeable in No. 1,3,6,7,11,12,14,15,19,20,22. In relation to these we must enquire about his association responses. The predominant right emphasis was explored on several occasions but never once was a spontaneous answer received which would illustrate how he himself viewed this affinity. The usual reply was "it looks better there" or "it just happened".

Concerning "enclosure patterns" we have more specific information which defines the boy's expressive urge to choose this type of structure. As apparent from many of the associations given with these enclosures, they must be of a purposive kind. They all seem to imply the graphic structuralisation of "fencing in". Their function for the child is one of defence directed against threats from outside. In the earlier treatment phases especially, they express a pre-conscious feeling content, that threatening forces of a vague kind are somehow nearby. These forces have either been defined as "old people", wild animals or fire. Later their focus becomes more

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(Footnote continued from previous page.)

right and left sides is probably not of primary importance. Several of their children were lefthanders but emphasised the right half and vice versa. The above authors think that this emphasis shown bears a relationship to the equally persistent stress on overlay.

differentiated and it centres on known figures.  
(father, brother).

But the still more unconscious element contained in these associations was the feeling that these enclosures themselves represented a threat to the person who happened to be inside. This threat came about either by virtue of their contractive power forcing people to be imprisoned or be suffocated (No.7) or through a dangerous and invisible fantasy figure residing there, the woodman, who is equipped with a chopper. Initially his fantasies said very little about his other qualities. His dangerous acts are performed without regret. Eventually when this figure disappears from the scene, the enclosure patterns became filled up with more "realistic" fantasies, signifying either power or danger, such as No. 19 (father), 20. (crocodiles) 22 (foxes). Finally with the dissolution of threatening figures he constructs a house (25) where his family live. This is placed almost centrally.

Emphasis on Overpainting or "overlay", may be seen in a fair number of paintings, although it is relatively less pronounced than in many other children of this group. The colour used was almost without exception black. It must therefore be a purposive choice selected by virtue of his realisation that black had some kind of veil function and would make other colours disappear. This is most strikingly shown in 4 (used here for covering



up the "body" which is in turn replaced by the black tree), 12. (a lot of water flooding the wall) and 14, (cloud in front of sun). Black has been used in 23 out of 28 pictures or patterns and is, thus, one of the most dominant colours as far as colour-range is concerned. It is of equal importance with regard to area covered by it. It is interesting to note that his uses of black for overlay and mass served a distinctly different function from the ordinary usage for line. In the latter it is employed for emphasis, in the former for covering up. Its double function has negative and positive aspects. The overlay attitude<sup>1</sup> disappeared during the second half of the nine months.

Kinetic Factors. The "frozen" movement in these patterns reflects fairly accurately the amount of control exerted by the boy over his stroke behaviour. These kinetic elements must be compared or contrasted with "expansive" or "compressive" trends discussed in the next paragraph.

As may be seen in some of the early (1,3,7) and also later (18,25) products, his stroke behaviour was at times subject to greater control than might have been expected from observing his general motor control, which was often rather poor, in particular when in a tense or aggressive mood. (e.g. 1.2.3.8.9.12.14.15).

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1. This trait not uncommonly appears in young children with emotional disturbances. Altschuler and Hattwick's quantitative data of children who consistently overlaid warm colours with cold ones, show a high correlation with assertive behaviour of a controlled type, repression self-centredness and lack of warm affectional relationships with others.

Initially expression through line or mass led almost entirely to a combination of horizontal and vertical strokes; the vertical representing static features and the horizontal movement. Both these components, in the absence of any other features, represent primitive <sup>1</sup> form elements (vertical→automatic up and down movement, horizontal→lateral to and fro movement.) These elements frequently appear in the abstract pattern designs of much younger children. Amongst his earlier paintings in particular the quality of the brush stroke is broken and interrupted. Structure was thus built up out of short stroke-elements, but this break is insufficient to result in merely small and widely separated areas, because of the rhythmic and automatic to and fro movement, which gradually (e.g. 4,10,13,16,20) extends over wider areas of the page. We are/therefore dealing with two primary elements related to movement. The one breaks up the stroke or limits it to small localised areas, conveying

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1. Preliminary work with serials done by pre-school children seen by myself and investigations on similar lines reported by Altschuler and Hattwick ( ) and Löwenfeld ( ), suggest that the preponderant and persistent use of these components is frequently associated with assertive behaviour. A. & H. also found strong negativistic tendencies in individual children who predominately use horizontal movement patterns. Löwenfeld suggests a differentiation between the employment of verticals and horizontals in young children through their identification of horizontal with movement and vertical with the stationary object.

an appearance of rigidity in the patterns (e.g. 1,3,5, 7,15,18,23,25). But this rigidity has a double function. On the one hand it may be based on over-control or undue anxiety manifested by increased automatism in the whole stroke range. Alternatively it may express a co-ordinating and integrating function over patterns, leading to greater clarity of form but to a rather static appearance of the whole design.

The other primary element is shown through increased continuity of brush strokes, and sometimes through complete dissolution of form elements. This we have called "Fluency". (See Section III, 2.) No extreme degree of fluency is shown in this series. Rigid elements are, on the whole, more predominant. But there are several phases where a mild or moderate degree of fluency becomes apparent, in particular 4,8,9,10,11 (slight), 13,14,17 (more marked, 28 (slight). Fluency, too, seems to have a bipolar function. In one case it enters into more or less differentiated structure (as in 17 and 29), in the other it is a component of an unstructured pattern. The latter was present to a more marked degree during a phase of quiescence, and in conjunction with his overt reactions, it may be taken as a sign of greater energy release and relaxation and through it as liberation of anxiety (8,9,10). The most rigid patterns occurred in temporal relationship with periods of tenseness, anxiety and asthmatic attacks.

Expansive and Compressive Trends.

These again show an all over relationship with emotional reactions. His qualitative mode of "space filling" has been discussed under "differential treatment". Here we must analyse the actual amount of space utilised. In 1,2,4,8,9,10,11,12,13,14,15,16,21, we have examples of complete space filling, i.e. his urge to complete the pattern was bound up with the tendency to use the whole of the available space. In other products this is less marked. There it is partly due to greater differentiation in structure as in 3,5,6,7, but this is not the whole explanation. An important factor seems his urge to expand and go beyond the margin of the page on to the table. This is most strikingly seen in 8,9,10,13,16,28, and less so in others. We find, on the whole, that the patterns showing marked expansion are at the same time the ones which have more fluent strokes, but not invariably so. Expansion in this case therefore coincides with emotional adjustment, and with increasing adjustment the extremer forms of expansion subsided.

Expansive and compressive trends must also be viewed from the standpoint of concept of space in relation

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1. The explanations suggested are that either the "filling" is merely a stage towards overstepping the margins, once the boy's assertive drives show more prominently in the painting behaviour, or that he has, to some extent identified himself with the standards expected from him and some of his "breaking out" of space is fenced in or blocked and he feels that he must make the most of it within the range permitted.

expressed form. Here the affinity with kinetic elements is much smaller, and it is by no means certain that the widening of space as shown by the actual size of objects and their individual expansion is necessarily based on either fluency or rigidity. We may deal with a separate primary trend.

Examples of very marked compression are 1,3,5,6, 11,15,23,24. There are two ways in which such compressive effects come about. In one case an unduly large number of structural elements are "crammed" into confined areas in 5,6,11,15, in the other space is artificially limited so that no further expansion can take place. Here it is worth noting that the "limiting colours" are black, blue or mauve. No. 28 shows this particularly well. This artificial space limitation is therefore essentially related to the other pronounced trait seen in this child, the emphasis on enclosure patterns.

#### Structural Elements.

The paucity of structure initially shown must be considered to be largely based on persistent and repetitive use of limited basic form elements, (short or medium vertical or horizontal strokes)<sup>1</sup>. These either aggregated into mass.that

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1. A. & H. found marked contrasts between groups of nursery children who worked with straight line, vertical or angular strokes as against those who did curvilinear or circular painting. The former were more outgoing, realistic, aggressive and assertive. The latter more dependent, compliant, affectionate, and lacking in confidence.



is often predominantly rectangular. In a small number of products circular curvilinear or wavy strokes stand out. For this reason the possibility for a great deal of structural differentiation is potentially more limited than in children of similar or younger ages who can activate the whole range of basic forms. This even applies to purely abstract patterns.

The main composite structures which may be observed are of an early schematic kind as the tree (3,4,11), house (1,5,17,22), human figure (5,6,7,17,18) and ship (23,24).

But in some cases primitive and more mature form elements

occur together (4,5,17,19). This feature alone is suggestive of considerable fluctuation.<sup>1</sup> But fluctuation effect based on single form elements, is by itself of no diagnostic significance (See Eng).

#### Method of Colour Usage.

His usage of colour to produce mass effect rather than line may be seen throughout. Colour is thus not filled into preconceived outline, although exceptions to this occur in later paintings. The colour placement

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1. General fluctuation, although not uncommon at all age ranges has been observed with greater frequency amongst emotionally disturbed younger children and mentally retarded ones. (Griffith ( 47.) describes this phenomenon with reference to drawing and other aspects of development. "There is no steady onward progression from one stage to the next, but a movement on and back which is distinctly progressive... but which would appear just the opposite if only a few successive drawings were examined. The child is absorbed in the subject matter of each individual experience. A study limited to isolated drawings is unable to observe these phenomena.

stresses, on the whole, separate areas and intermingling is at first avoided. Concerning predominant colours, these can only be analysed by linking them with the actual verbal associations given in relation to structure to which colour was applied. Here only his more constant associations can be utilised. The main colours focussed on are in, 1. (blue, black), 2. (black), 3. (black, brown) 4. (black), 5. (black, red, mauve, yellow, blue, brown), 6. (red, black, mauve), 7. (black, blue, mauve), 11. (red, black), 12. (black), 14. (red, black), 15. (red, black), 17. (black, mauve), 18. (black, white), 19. (red), 20. (brown, black), 2. (black, red, green), 23. (green, black), 24. (green, yellow, black), 27. (black).

Although this series as a whole gives to some extent a multicolour effect, its colour range being about the average of the group, it would be a mistake to think that therefore these colours are all of equal significance. The specific emphasis given by associations clearly demonstrates that the most significant colours were black, red and mauve.

#### Integrative Capacity.

This boy belongs to a group (see also sect. III,3) of children who persisted for varying periods in painting so-called "abstract" structural patterns, at an age when the majority of children turn to more representative

work. It is therefore interesting to see in following his series by what process he achieved the gradual transition from abstract to representative structure.

The manner in which he organised basic form elements into more or less integrated patterns is to some extent explained by his attitudes to space, kinetic behaviour and colour usage. All these patterns might at first be thought accidental and, although it cannot be denied that some possibilities for artefact painting occur, when the designs are examined in the order of their appearance, we cannot escape the conclusion that in them persistent characteristics, typical of his personality, are shown.

Firstly then, we notice here a fluctuation from relatively more to relatively less abstract designs. In some cases (3,6,7,11,14,17,19,24) representative structure and abstract forms composed of primitive form elements occur together. The degree of predominance of one or the other element varies with the extent to which he achieved to create representative shape and also with the type of associative responses given. We can assume that probably right from the beginning he endeavoured to create something meaningful. This is borne out to a varying degree by all the early products, but every time he was unsuccessful at expressing form he had to resort to a less specific and therefore to a more abstract expression. Now it is interesting that in

these very patterns his associations were rather elaborate and often tinged with frightening fantasies. It may therefore tentatively be concluded (from this and other similar cases) that the emotional disturbance, has a more definite bearing on his type of abstract pattern.

There are other types of abstract patterns to which this cannot apply, for example the straight movement patterns exemplified by 8,9,10, with which no relevant associations were recorded, nor can it apply in the same sense to the rigid and conforming pattern which was painted within the play group.

The significance of the many types of abstract patterns is thus far from clear, each one must be analysed carefully in conjunction with associative responses. Further reference to this type of expression is made in section III.3.

With the exception of perhaps Nos. 6 and 17, an impression of total disintegration is never conveyed in this series in spite of its manifest lack of representative structure. What then are these integrating mechanisms?

In the last 4 products we find an increasing emphasis on realism, i.e. the apparent content of these paintings is to a large extent conveyed to the observer by their structural elements alone. In the preceding ones this is less so. Here thought content and

verbalisation are important integrating factors. The effect of conflict or generalised anxiety have conditioned these in many respects. These paintings show a good deal of cohesion but not sufficient realism, to be clearly identifiable. The assumption that this relatively sudden progress from cohesion to realism can be explained by developmental effects is hardly tenable, as one finds a large number of emotionally disturbed children (Sect. III) who show a to and fro swing from cohesion to realism, during periods when they could potentially create realistic structure.

#### Associations with Graphic Structure.

When the serial patterns are compared with the given associations a progressive development similar to the structural features in these patterns emerges. Initially all responses, no matter what their potential significance, were recorded. The material allowed for a classification into two distinct categories.

1. Associations which showed week by week fluctuations and, because of their instability, were thought to be of minor importance as they reflected trends found in all children.

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1. e.g. Eng. "The quick change of forms and content (in Margaret during her 5th year) suggests that her ideas are fugitive which was in strong contrast to the rigid persistence with which she used to demand the endless repetition of one or two given drawings. The same fanciful change in motive was observed by Major in the case of his son, by Dix in the case of Walter-Heinz at about 4.8, Stern also observed it in his son Günther at about 4, Scupin in Bubi's case in the 5th year, and Luquet in the case of Simonne."



2. Certain basically "fixed" or stable responses, which indicate a considerable degree of preoccupation with their content. These often focussed upon very localised aspects of the paintings. Because of their persistent focus on certain structural features the assumption was made that they contained projective elements expressing either a more specific conflict or were indicative of increased anxiety.

The meaning of these associations passes through a fairly well defined transformation, from rather vague and unorganised fantasies to more differentiated and specific ones. The more unorganised the structural elements the more pre-conscious these fantasies seem to be, and the more their content seems to be tinged with vague and unlocalised fear. Thus the structuring of fantasy content in some degree fits the building up of graphic patterns.

Examples which illustrate this are

1. Qualitative fluctuations which bring out changes in social relationships (for instance by being in a group of other children, stay in hospital, or change of his position in relation to other members of his family), shown by A 8,9,10,17, and A.4.
2. The elucidation of conflict or anxiety which does not necessarily coincide with real events, as shown by A.17.
3. His specific modes of showing fear in fantasies and the emergence of elements related to somatic sensations, such

as "constriction", "cutting", "chopping", "swallowing". Here projections frequently occurred in relation to encolure patterns.

Shown by A.1,2,4,5,6, and possibly 14.

4. The fluctuation of fantasy figures with parent images and the unconscious meaning of male and female. A.1,2,3, 4,6,7,10,11,12,13.

5. The manner by which he adapts fairy tales for his own purpose e.g. A.5.

#### The Question of Indicators.

During his second half of attendance i.e. from approx. No. 17 onwards this boy showed a manifest improvement in almost every respect, in spite of his set-back leading to hospital admission. From what is known about asthma in children it would clearly be untenable to attribute this improvement largely to what is called a "spontaneous remission". We know from his history that he did not have this tendency in previous years and in addition the present prolonged freedom from attacks (now over 12 months) is clearly related, in time at any rate, to "treatment", "Free expression", "play therapy", or whatever one may wish to call it. What possible clues can the analysis of his paintings give us about this improvement or "remission".

When we once again look at his series in the light of previous findings we recognise in its first half a number of persistent traits (i.e. during the time when

he was ill, emotionally disturbed and showed spasmodic asthma), which are either much less prominent or totally absent in the second half.

These are

1. vertical page division
2. "enclosure patterns" and fenced in" areas
3. overlay
4. temporary fluency and expansion
5. "abstract structural patterns" showing a combination of primitive and more mature elements

If we examine these traits in the light of general graphic development we are on uncertain ground about their significance. But as far as our information goes (5) it is unlikely that any of these elements, with the possible exception of 4.), are primarily under the influence of developmental graphic trends. As previously mentioned "fluency" and "expansion" are of a very transient nature in this series. Moreover they coincide in time with increasing emotional stability and then disappear. It would, therefore not be unreasonable to consider them as positive features or "release phenomena".

In marked contrast to this the other four traits all contain negative elements, i.e. in the context of the child's illness they signify the graphic expression of a specific conflict and of generalised anxiety. If examined in this light they are essentially conditioned by his innate personality (which includes constitutional predisposition) and by temporal emotional fluctuations. This is, in fact, borne out when we examine these traits in conjunc-

junction with past and present association responses.

If such responses were examined alone (i.e. without the related structures) it would not be possible to derive therefrom the nature of a child's self expression, as they could be based on various interpretive hypotheses. They might for example, because of their preoccupation with genital symbols, be explained in a Freudian sense, or also in a Jungian sense because of the emphasis on parent figures of an archetypal kind. Alternatively one might give them Adlerian meaning because of the direct and forceful expression of power drives. With certain qualifications also a Kleinian meaning could be construed into them, in view of the incorporation fantasies shown. On the other hand the material presented here could be used in the sense of Levy in that a specific sibling rivalry conflict was postulated. All these approaches reflect to some extent the true features of the case, but do not give us a fuller understanding of why typical formal elements in graphic expression have typical emotional concomitants. We are therefore on very insecure ground when we attempt to assign a definite symbolic meaning to formal aspects in paintings.

, As a further step in the analysis of persistent and specific elements we will now turn to an examination of the formal and associative trends in a group of children.



### SECTION THREE.

#### THE NATURE OF INDIVIDUAL PATTERNS.

An Investigation into the Genesis of  
Graphic Trends in a Selected Group of  
Children treated from 1947 to 1950.  
(With illustrations and Colour Transparencies).

## 1. CLINICAL ASPECTS

### Selected Group for Therapeutic Study.

40 children who had initially shown some preference for brush-painting were selected for serial observations in the course of treatment. All of these presented functional somatic symptoms and an emotional disturbance with maladjustment. The guiding principle for selection was not so much to collect a sufficient number of common somatic dysfunctions of one or the other type, as to predict with reasonable certainty, by means of a short preliminary period of observation, factors which related to precipitation and maintenance of the respective disorders.

### Types of Data.

The data for this investigation are derived from,

1.) Referral note with preliminary statement, either from a General Practitioner, a medical officer in the school health service or a consultant attached to the pediatric department of a hospital.

2.) Information about the child's personality, development and environment.

a.) Histories taken by psychiatric social worker and psychiatrist.

b.) School report from nursery or primary school. This includes observations on general behaviour and relationships with other children.

c.) Record of examination by the clinical psychologist. This includes results from formal intelligence tests and observations on the child's behaviour during testing. The tests employed were,

The Merrill Palmer Test in children below 3 1/2 years.

The Terman Merrill Test in children above 3 1/2 years.

Performance Tests of the Alexander Scale.

The Goodenough Men Drawing Test, (also used for projection responses during observation period).

- 3.) Record of the child's physical condition, where considered necessary.
- 4.) Data on the initial play behaviour, individually or in small group.
- 5.) Records and observations during treatment and follow up.
  - a.) a series of spontaneous paintings with the child's associations. The initial ones were commonly noted on the painting sheet and more detailed notes added later. Further responses were derived from retrospective elaborations throughout treatment.
  - b.) Brief records of other play activities.
  - c.) Information concerning phasic behaviour of somatic dysfunction during treatment and follow-up.

The minimum time for which serial records are available in every case is one year. In 34 children this amounted to from 18 months upwards to 4 years. The latter are children who required continued attendance for treatment or follow up.

The ages quoted in Table I. are counted from the patient's first visit to the clinic. Mental ages were assessed by the tests mentioned above. The investigation

excludes children who would have been considered as "defective or dull" from the standpoint of these test procedures, as their inclusion would have further complicated the analysis of graphic productions. The mean distribution of I.Q. is, thus, considerably higher than in a random sample of equal size of the population,

#### Selection of Group.

So called "diagnostic interview procedures" in Child Psychiatry are not yet in a position to define with accuracy either the nature or the severity of a disorder. This applies even more so to group designations, and is strikingly illustrated during prolonged and detailed observation of such a group. The most significant factor, the type and degree of emotional disturbance, remains the most difficult one to assess in relation to other factors which are known to operate. In somatic dysfunctions this is of special interest, as the manifest symptom patterns often show a time-relationship to events which condition emotional behaviour. Children with such symptoms are very commonly seen at a pediatric or other out-patient department of a general hospital and known clinical methods of diagnosis and treatment prove singularly unhelpful. Such cases are then referred to a psychiatrist with the psychosomatic label attached, which merely means that their selection has been based on negative findings in organic medicine. The weakness of this choice becomes apparent in the ordinary day to day

practice of a child guidance clinic and from the research angle is of even greater consequence. The final selection of a group for therapeutic study should depend on positive data pertaining to development, personality and nature of emotional responses.

After the collection of the relevant diagnostic data one often finds that neither single interview impressions nor one stage psychological techniques can supply <sup>2</sup>fully <sup>1</sup>necessary positive data for later treatment. For this reason the eventual selection of the "treatment group" was based on a preliminary period of observation lasting from one to two months in each child. During this observation-phase objective and subjective techniques could be brought to bear on the problem, in addition the available information about symptoms, history and environment could be re-checked. A very much larger number of "psychomatic" children attended for such periods, (115), and many of these were also taken on for treatment but not included in the group for study.

#### Aims of Observation Period.

The prime purpose of these interviews was to confirm, if present, a disturbance in the child's feeling life and social relationships, as initially seen by parents, school and clinic. In addition more specific information was sought about,

1. The degree to which the disturbance centred either on social relationships or on inner feelings.



2. Temporal factors related to symptom formation, such as the interplay between phasic variations of physical symptoms and emotional factors or events related in time to precipitation of such symptoms.
3. The meaning of the somatic factor, as shown by the child's (and parent's) expressed feelings about body functions, his interest in parental or medical concern, and the degree of real or imaginary disability caused by them.
4. The severity of the disorder.
5. The child's interest in spontaneous projective painting, and other play activities.

#### Graphic Criteria for Selected Group.

Turning to our subject of special study, here the selection was based on empirical findings guided by such specific knowledge as we already possess about graphic expression in children. The child must naturally have shown an interest in brush painting. But in addition special consideration was given to certain graphic features in his early productions which were suggestive of emotional disturbance. These were not designed in any sense to be diagnostic but served merely as an initial clue to his capacity for form-expression. No child was included who did not show features in one or more of the following four fields.

1. Primitive structural elements in the human figure representation or initial paintings; or a combination of primitive and mature characteristics.
2. Complete or partial synthetic incapacity.
3. Unusual attitudes to space and colour such as marked compression of whole design or of single elements, marked expansion, "differential treatment", and "overlay".

4. Associations with the human figure drawing or with paintings suggestive of conflict.

For examples illustrating these aspects see Table III. (p.153)

#### Associations with the human figure drawing.

This method, adapted from the Goodenough Drawing Test, was used as a more objective and formal production test during the observation period. It served the purpose of making an initial assessment of "developmental drawing capacity" and of evoking spontaneous associations. The technique was developed by me in 1946 and has since been used on several hundred children of all ages as well as on adolescents and adults with psychosomatic symptoms.

Briefly, the child is asked to draw "someone", either "a man" or "a woman" "and to put everything in there should be on this person". No further suggestions are offered. The drawing is made on a standard sheet of white paper with an ordinary medium pencil. When completed he is told, "now let's make up a story together about this person". He is encouraged to talk as much as he likes, and should he come to a stop the psychiatrist may direct him by non suggestive questions to other aspects of the drawing, which have so far not been mentioned. Verbal responses arising from this conversation are grouped and related to the subject's real life history and environment and also to the formal aspects of the drawing itself. The order of the grouping is,

- 1.) Social features of the story: Age, sex, identity, occupation of the person. Description of his home and its occupants. His attitudes to family, companions or friends, school or place of work.
- 2.) Structural features of the drawing: Its approximate development-level assessed according to Goodenough. Method of execution. Unusual features or distortions. Missing parts. Shading, retracing, erasures, mottling. Clothing and adjuncts such as tie, buttons, pockets, stick, pipe, weapons. Parts not clearly identifiable. Differential treatment of right and left. Placement and size. Static or moving.
- 3.) Verbal associations with structural aspects: Parts marked "good" or "bad", Illness, injury or pain identified with body-regions. Elaboration of symptoms, operations, medical treatment, fear of death etc.
- 4.) The child's self appraisal in relation to figure and story. In chapter 3 under "associations with colour, structure and design" a more detailed description with an example from this test, is given. At this place it is merely intended to give a brief outline of what it may tell us about the child's personality and how it is used as an adjunct to other approaches.

Although it constitutes a semicontrolled procedure unlike routine intelligence tests standardised norms are not available for it (apart from the Goodenough norms which are only matched with intelligence). As mentioned in Section I (15.17.) normative attempts have been made, but have been found to lack validity on re-checking by other workers. In my view it is premature to use it along statistical lines until we possess a great deal more clinical material than is at present available. It does, however, provide us with a check list of items some of which can be used as "indicators" in connection with other sources

of information. In some ways it is supplementary to the projective painting method in so far as it gives tentative clues to both positive and negative feelings in the child which become often revealed more gradually, although with greater certainty, in the serial approach. Its diagnostic usefulness lies especially in the following fields.

1. Conflict Indicators mainly through associations given with the drawing. These may provide clues either to self-traits in the child (such as his rejection of certain aspects of his reality and of substitution in their place of more acceptable features, or feelings of fear and guilt) or directly reveal unhealthy or undesirable features which really exist in his environment. (The first instance is illustrated by a 5 year old boy who was jealous of his baby sister and described the imaginary figure to be "living in a large house in the country with his mummy and nobody else". The second by a girl whose mother showed an excessive urge for cleanliness and order, which often upset the household. Here the person, also a girl, was "always washing things for mummy and when she does not wash she goes away from the house".) Such features often become only gradually revealed in constitutive play with dolls families or similar material.
2. Conflict indicators resulting from associations with the structural organisation of the drawing. Emphasis often becomes fixed on parts of the body which have received differential treatment by the child. The aim there is to obtain feelings about body functions and disablement.

#### Clinical Findings and Symptoms.

##### Psychologic Factor.

Its assessment depended, apart from the usual diagnostic criteria, on the employment of projection responses from graphic sources. In the following, symptoms which are

manifestly psychological are briefly described, special attention being given to their frequency and severity. A comparison of the total diagnostic material obtained allowed for a division into those manifestations which primarily effected the child's feeling life (neurotic manifestation), and those which bear witness to his environmental relationships, (behaviour manifestation). In every case this was related to the mother's personality and the child's place within the family. Obviously many of the children showed other traits, which are not mentioned, as they were found to be of smaller significance for the groups as a whole.

Neurotic Manifestations. Localised anxiety.

21 children or over 50% more continuously verbalised their feelings of fear and in most cases centred these on something imaginary. The most frequent phobias were of fire, aggressive fantasy figures, of dying especially by drowning or choking; of loss of mother, biting animals, bombs or noises. Less frequent was persistent fear of adults, of germs or dirt, of swallowing something heavy and, in one case (a boy) of giving birth through the alimentary canal. (Case No.24). Unlocalised anxiety. 14 children showed no recurrent phobias whatever. Their fears were unattached to an external stimulus. Often they showed anxiety attacks of a dramatic kind. This applied especially to some of the asthmatic children.<sup>1</sup> Such attacks were

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1 The findings here essentially agree with those of Rogerson (95.p.390) who found that in the majority of his asthmatics the attacks seem in relation to anxiety and the psychological difficulties in a general way and are not



either seen during treatment or described by the parent. Frequent accompaniments were sweating (e.g. XXXVIII), dizziness (e.g. XIV, XXVI, XXXI.) also shaking and trembling. Problems related to Sleeping Behaviour.

Owing to the marked frequency of major disturbances of this kind, these are treated separately. 13 children or 33% showed severe fright reactions at night, invariably brought up as a complaint in the course of the initial interview. Seven children were at first unaware or only partly aware of these, but gradually began to describe them in the interview, or associated these with paintings which were sometimes followed by their cessation. They either took the form of fearful sleep experiences followed by partial unconsciousness (night terrors), or by immediate waking up (nightmares). 5 children were suffering from somnambulism when first seen, 5 had asthma attacks following nightmares, and 2 exhibited nocturnal epileptic fits. The parents' description varied from case to case, such as, "terrible nightmares and screaming" or, "he is fixed and will not speak, even if you shake him", or "cries for hours afterwards and thinks somebody comes for him."

Behaviour Manifestations.

A prolonged behaviour disorder, leading to mild, and in some cases to considerable maladjustment, was encountered in a total of 15 children or 37%. In 8 of these the difficulties seemed to centre predominantly or

entirely around the mother-child relationship. Sibling rivalry or quarrels with other children were often claimed to play a role, but were almost invariably found to be secondary.<sup>1</sup> The child was of a domineering personality, often showed violent temper outbursts, obstinacy and destructiveness. Yet in every case he was either an only child, or in other respects vulnerable in his position to the rest of the family. The other 7 children showed more ominous behaviour trends, but here the immediate environment must be considered significant. The crowding of living accommodation, squalor, in-law interference and friction between the parents rank high. In 5 of these the mothers were conscientious, hardworking and fairly evenly balanced, fighting a losing battle against impossible environmental odds.

#### Mothers.

In 14 mothers there was evidence of a deep seated personality disorder and/or psychomatic illness. It was necessary to give them more intensive psychiatric help. 4 of these had asthmatic attacks, 3 migrainous headaches and another four suffered from recurrent rheumatic complaints. In addition 3 showed more severe neurotic disorders and had been repeatedly admitted to mental hospitals. (VIII, XII, XXXVII.)

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1. One of the exceptions was case No.15.

### Teachers' Reports.

Of 31 children who attended either nursery or primary schools, independent teachers reports emphasised adjustment difficulties in 19 of them. 5 of the remaining 12 had problems related to scholastic performance, but not behaviour.

### Relation between Emotional and Somatic Disorder.

For assessment of severity of somatic dysfunction the following criteria were applied. Independent medical opinion (e.g. child's G.P.), No. of Hospital admissions as in-patient, frequency of medical attendance and emergency measures, frequency of periods away from school and inter-current illness. Judged by these the following cases must be considered as having produced considerable disablement on physical grounds, I. II. VI. III. XIV. XV. XX. XXVII. XXXIII.

With regards <sup>to</sup> the emotional disturbance the criteria indicative of disability were, degree of maladjustment in home and school, overt behaviour at treatment interviews, parental attitudes and personality, and graphic patterns and projection responses. This applies to No. I. II. III. VI. X. XI. XIV. XV. XVI. XIX. XX. XXIX. and XXXIII.

This leaves at least 7 cases in which severe somatic symptoms coincided with an equally marked emotional disturbance.

### Somatic Factor.

All cases under review presented a persistent somatic dysfunction for which no organic basis could be elicited

at independent physical examination prior to referral. When making an assessment of severity it had to be taken into account to what extent this dysfunction was operative in prolonging the emotional difficulties present. It had invariably interfered with adjustment, often in a severe degree. Repeated hospital admissions, loss of schooling, deterioration of capacity at school, (through absence from games or classroom, being teased etc.), were the most common causes, apart from increasing the parental anxiety. 15 children or over 35% of the total had been in-patients at hospitals as the result of these complaints. The periods range from 14 days to 3 months. In a number of cases open air school or convalescent home placement had been required. Several of the aspects related to the somatic factor have been summarised in table I. and will be referred to again in this section.

#### Types of Dysfunction.

##### Asthmatic Attacks.

15 of the cases quoted showed recurrent asthma, in 4 of them there was also associated with eczema while under observation. 3 main types of phasic behaviour were noted when studying the nature of attacks and periods of intermission.

- 1.) Fairly frequent attack phases, (weekly or twice weekly), more commonly commencing towards the evening, exhibiting paroxysms of short duration and periods of preceeding or subsequent wheeziness of usually less than 48 hours. This type was seen in cases I.IV.V.IX.XXIII.XVII.XXVIII.

- 2.) Less frequent attack phases (every month or 6 weeks), during which bursts of often severe paroxysmal attacks appear in close succession. There is a prolonged interval with cough or wheeziness. The child seldom remains ambulant and not infrequently goes to hospital (see Tab.II.) Some of these children have for long periods been treated as medical emergencies, receiving adrenaline injections or becoming dependent on an asthma pump. Cases II.III.XIV.XV.
- 3.) Indistinct attack phases where periods of wheeziness are of prolonged duration but pronounced paroxysms are rare. Here the time of crudesence sometimes extended over several months. These are older children, who were reported to have had more frequent and severer attacks in earlier life. Cases XXXVI. and XXXI. show this typically.

9 of these 15 children had attended various general hospitals regularly prior to psychological investigation. There treatment focussed mainly on the allergic aspect and a course of desensitisation had been given to 3 of them. Others had been on ephedrine, phenobarbitone or antihistamines without any noticeable changes in the severity or phasic occurrence. This factor led to the assumption that the associated emotional disturbance might play a part in the precipitation of attacks. While undergoing psychological treatment 4 children were also seen at the Asthma Clinic of Guy's Hospital or the Pediatric Department at infrequent intervals. (every 2 - 6 months).

#### Eczema.

This was present, either alone or in association with asthma in 8 children. In addition 6 of the other asthmatics were reported to have shown eczematization at



some stage prior to psychological treatment, but this was not observed while attending at the Clinic. The nature and distribution of the rash was on the whole in accordance with the original description given by Barber ( 1. ).

In 6 of the children it had made its first appearance in the face, especially around the mouth area, then spread to the folds of the extremities and later in 4 cases to the extensor surfaces where lichenification occurred. Half the children originally showed weeping eczema in all the areas indicated and in one case there were extensive areas in the groin. (No.33).

Generally speaking cyclic changes in this condition were much more difficult to assess from the description given by informants. The observations are therefore mainly based on the periods of observation at the clinic. In 4 cases the recrudescence of eczema altered to a striking degree with the remission phases of asthma, but it should be noted that the eczematization in all the asthma cases seen was much less severe or at any rate more localised than in the pure eczemas. This localisation sometimes assumed a fleeting character, i.e. when it was present around the knee areas it subsided at the elbows and back of hands or vice versa.

Nevertheless, in at least 3 of the eczemas (VIII.XIV.XXXIII.) cyclic changes were doubtless subject to a personal rhythm, showing short phases of not more than 1 month followed by almost complete intermission. In 3 others recrudescence was usually prolonged and intermission according to the Barber, H.W. Lancet, London, 1929. ii. 591.

informants had never been complete. 4 cases attended a skin department while receiving psychological treatment.

Periodic Sick Headaches.

In the 5 cases quoted the description given was of periodic bouts of localised headache (frontal or temporal) accompanied by feeling of sickness or frank vomiting. In one instance there was frequency of micturition during these attacks and two children complained of pains around the navel. With 2 children the parents gave much more dramatic descriptions, such as, "if one of his bouts comes on he lies down wherever he is, perhaps on the floor, almost unconscious. He is then carried to bed and his eyes look very glassy, his face is pale blue." With the severer attacks several days 'or sometimes a week's' schooling may be lost. In all cases the frequency of attacks could be easily ascertained, usually from once a week to not less than once a month, and the duration varied from about 6 to 36 hours. Drugs were not received by the child while attending at the clinic.

Fainting attacks.

These 4 children all showed a severe emotional disturbance with aggressive behaviour apart from recurrent fainting fits. Confirmatory evidence was sought through repeated, E.E.G. recordings and each child is considered to have an epileptic focus in at least one of the records. Two of these children received regular drugs throughout their attendance, the other two did not. 2 of the cases are later described in detail.

### Faecal Incontinence.

All these 5 children had a particularly intractable encopresis and during the observation period showed a deep-seated personality disorder. 3 had associated enuresis. 2 had previously received psychiatric treatment (without improvement) and following this, to their detriment, passed through further physical investigations. None of these had shown spontaneous remissions, the incontinence occurred regularly every day. \_\_\_\_\_ these children took on the whole longer than any of the others to show significant improvement and reasons for this are advanced in Chapter 4.

Enuresis.

5 children had enuresis as a single dysfunction, in some of the other cases spasmodic wetting occurred as an associated phenomenon. The enuresis was nocturnal, regular every 24 hours, except for short intermissions up to two weeks, when the child was away from home. Several of these cases are described in detail later.

Excretory Inhibition. One child(case XXIV) with fecal retention was also included.He is described in chapter 3.

In the following table cases which have been quoted in greater detail in the following accounts are underlined. Severe disturbances are marked with a cross(X).

TABLE I.

## SUMMARY OF GROUP.

<u>Case No.</u>	<u>Age</u>	<u>I.Q.</u>	<u>Somatic Disorder</u>	<u>Emotional Disorder</u>	<u>Time under Observation</u>
I.f.	3.10.	105	Asthma, Eczema	Night terrors, separation fears, violent tempers.	12m.
II.m.x.	4.3.	110	Asthma, Eczema	Feeding difficulties, domineering, spiteful with others.	30m.
III.m.	3.1.	100	Asthma	Phobias of various kinds	18m.
IV.f.	4.2.	108	Asthma	Persistent insomnia, fear of animals.	18m.
V.f.	3.4.	112	Asthma	Night terrors, aggressive outburst c other children.	18m.
VI.m.x	4.2.	87	Fainting attacks	Periodically uncontrollable, very destructive	18m.
VII.m.	3.1.	100	Eczema	Frightened of adults and noises, negativistic and mute.	20m.
VIII.m.	3.4.	110	Eczema	Fear of dirt, depressed.	36m.
IX.m.	4.3.	128	Asthma, Psoriasis	Marked exhibitionism, tries to injure baby brother.	24m.
X.m.	4.5.	121.	Encopresis.	Aggressive, temper tantrums.	15m.
XI.f.	4.1.	113.	Enuresis	Night terrors, running away from home.	24m.
XII.f.	3.8.	110.	Eczema.	Dread of losing mother, crying spells, aggressive towards mother.	24m.
XIII.m.	4.5.	90-121.	Fainting attacks.	Tantrums	12m.
XIV.m.x.	6.0.	114.	Asthma	Fear of fire, extreme anxiety, very rude with mother.	36m.
XV.m.x.	5.5.	118.	Asthma	Aggressive beh.c.brother, negativism.	36m.
XVI.m.x.	6.7.	91.	Encopresis.	Nightmares, mutism, negativism, must sleep in mother's bed.	16m.
XVII.m.	6.8.	123.	Asthma.	Fears of choking at night.	16m.
XVIII.m.	6.8.	112.	Enuresis	Nightmares. Tears bedclothes.	18m.
XIX.m.x.	5.7.	98	Encopresis.	Steals, destructive, pleased about soiling, often depressed.	24m.
XX.m.x.	6.10.	90.	Fainting attacks.	Wanders, steals, vivid fants. of murders, noct. frights. followed by	18m.

TABLE I. (Continued)

<u>Case No.</u>	<u>Age.</u>	<u>I.Q.</u>	<u>Somatic Disorder.</u>	<u>Emotional Disorder.</u>	<u>Time under Observation.</u>
<u>XXI.f.x.</u>	6.	117.	Fainting attacks.	Fear of dark, somnambulism, screaming attacks.	30m.
<u>XXII.m.</u>	7.1.	112.	Migraine.	Afraid of father, refusal to attend school.	36m.
<u>XXIII.f.</u>	5.9.	110.	Asthma	Nightmares	30m.
<u>XXIV.m.</u>	6.1.	124.	Faecal retention	Refusal to go to lavatory.	18m.
<u>XXV.m.</u>	7.5.	111.	Enuresis	Marked timidity.	30m.
<u>XXVI.m.</u>	6.22	108	Enuresis	Aggression to sister (also enur.)	36m.
<u>XXVII.m.</u>	6.5.	110.	Asthma, Eczema.	Night-terrors, phobias, somnambulism, isolates himself in school.	18m.
<u>XXVIII.f.</u>	7.2.	114.	Asthma.	Domineering and aggressive.	18m.
<u>XXIX.m.x.</u>	7.0.	84-100.	Migraine, Enuresis.	Mutism, withdrawal, Night terr. somnambulism.	48m.
<u>XXX.m.</u>	7.8.	104.	Migraine.	Aggressive outbursts at school.	36m.
<u>XXXI.m.x.</u>	8.0.	98.	Asthma, enuresis.	Terrible nightmares, very passive child. Refusal to go to school.	18m.
<u>XXXII.m.</u>	8.5.	96.	Asthma.	Fear of germs, extreme slowness.	18m.
<u>XXXIII.f.</u>	8.4.	128.	Eczema.	Easily fatigued, self-conscious, sensitive of failure at school.	30m.
<u>XXXIV.f.x.</u>	7.8.	110.	Encopresis.	Contn. screaming at night, passive, mute, clings to mother.	36m.
<u>XXXV.f.</u>	8.	106	Migraine, enuresis.	Stealing, wandering.	30m.
<u>XXXV.f.</u>	7.8.	103.	Asthma, Eczema.	Moody, depressed, no contacts.	36m.
<u>XXXVI.m.</u>	8.	123.	Enuresis.	Motor restlessness, anxious.	28m.
<u>XXXVII.m.</u>	8.	111.	Migraine.	Periodic depression.	30m.
<u>XXXIX.m.</u>	7.7.	100.	Enuresis.	Fear of choking at night, grimacing, sensitive at school.	28m.
<u>XXXX.m.</u>	8.0.	116.	Enuresis.	Seclusive, poor contact at home.	18m.



### Precipitating Factors.

A study of the developmental histories brings out striking differences between the nature of events related in time to the onset of disorder and those which link up with subsequent precipitation. The information quoted in Table II. is based on repeated interviews with parents during the observation period, but it was for obvious reasons impossible to obtain unequivocal data in every instance. Yet in a high percentage the events preceeding the arrival of first symptoms were clearcut. With regard to "secondary precipitation" the difficulties in obtaining accurate details were somewhat greater, and often opinions had to be weighed against events. This assessment was at least difficult in the children with asthma or recurrent headaches, probably due to the rather dramatic effect of the attacks which impressed itself on the informants memory, and perhaps equally much because of the mother's increased concern or interest in the symptom, especially, as it happened in some cases, when she herself suffered from a similar complaint. Their preoccupation with eczema was equally striking, but here the long drawn out phases made detailed appraisal more difficult. Observations in the two dysfunctions which show a daily rhythm are more concerned with the events preceeding or accompanying remission. In the four epileptic children the matter could not be assessed with accuracy. The factors quoted below relate to those events considered as most significant when the development, environmental situation, and the parent's

and child's personalities were taken into account. An obvious criticism which immediately springs to mind when examining the factors summarised under "subsequent precipitation" is the type of emotional disturbance which bears a time relationship to the onset of attacks. The sceptic would say that this might just as well be caused by the imminent attack of asthma or migraine than vice versa. In this context it should be clearly stated that the factors quoted here stand in a temporal and not a causal relationship to the dysfunction and until it can be shown that a decrease of the child's emotional tension will also lead to rhythmic changes in the dysfunction, no clear causal relationship can be established.

#### Initial Precipitation.

The information suggests that in little under 25% this followed closely on actual physical illness, especially infectious fevers, in 18% the onset dates from birth or could not be clearly defined and in the remaining 57% it was related in time to traumatic emotional experiences, of which especially striking examples present themselves in cases III.XIV.XXI.XXIV. and a number of others.

#### Secondary Precipitation.

Here the dominance of emotional factors seems even larger. After careful crosschecking of the parent's statements, evidence for repeated physical aspects could only be obtained in two cases, but even here validity is doubtful. In 25% the events related to repeated causation

were too uncertain to allow for classification, although in some emotional elements obviously suggested themselves. In the remaining 70% the events preceeding repeated causation of physical dysfunction were predominantly or exclusively emotional in nature. In about half of these the emotional problems rested largely with the child, in the other half they were conditioned through environmental difficulties. Here parental discord figures as the most potent single factor.

#### Family History.

This was checked with regard to two different types of illness:

- 1.) Somatic dysfunctions and disorders showing phasic changes: Asthma, epilepsy, migraine, duodenal ulcer, "rheumatism", hayfever, enuresis and encopresis.
- 2.) History of "nervous breakdown" with admission to a mental hospital.

The figures quoted only apply to siblings, parents or grand-parents. They would be considerably higher with the inclusion collaterals. In 29 cases findings were positive with regard to one or more of the disorders quoted under 1.) Three of these also gave additional evidence of mental illness. History of the latter alone was found in an additional 5 cases, accounting for over 85% of the total.

TABLE II.

PRECIPITATING FACTORS.

<u>Case No.</u>	<u>Initial Precipitation related in time to</u>	<u>Subsequent precipitation related predominantly in time to</u>
I.	Tonsillectomy	Temper outbursts with mother.
II.	Uncertain	Frustration following domineering behaviour at home.
III.	Screaming attack after being smacked.	Frustration.
IV.	Tracheitis.	Family quarrels.
V.	Seqn. from mother.	Night terrors.
VI.	%	Attacks appear unprecipitated by emotional or other known f.
VII.	Gastro-intest. upset.	Uncertain.
VIII.	From birth.	Fluctuations related to mother's stays in mental hospital.
IX.	On leaving for holiday	Attributed to changes in temperature.
X.	Toilet training.	Does not soil when with mother.
XI.	Violent quarrel w. father.	Difficulties between parents.
XII.	Seqn. from mother, accident to father.	Difficulties c. mother (an endogenous depression).
XIII.	Uncertain.	Uncertain.
XIV.	Return of father from forces.	Non specific. Anxiety attacks.

Table II (continued)

<u>Case No.</u>	<u>Initial Precipitation related in time to</u>	<u>Subsequent precipitation related predominantly in time to</u>
XVI.	From birth	Sepr. from mother led to remission
XVII.	Night terrors	Night terrors.
XVIII.	Sepr. from home.	Uncertain.
XIX.	Mother's pregnancy.	Soiling at school only.
XX.	Nightmares	Family quarrels.
XXI.	Accident to father	?
XXII.	Air raid.	Home quarrels
XXIII.	Bronchitis	Play with other children.
XXIV.	Sexual information.	Mother's preoccup.c. toilet training.
XXV.	Birth of sibling.	Non specific anxiety.
XXVI.	From birth.	Parental difficulties.
XXVII.	Following measles (in hospital)	Night terrors.
XXVIII.	Following birth of younger sister.	Physical exertion (mother states)
XXIX.	Death of parents.	Mood swings.
XXX.	Diffic. when starting school.	Subside when kept at home.
XXXI.	Bronchitis.	Night terrors.
XXXII.	Following teething.	?



Table II (continued)

<u>Case No.</u>	<u>Initial Precipitation related in time to</u>	<u>Subsequent precipitation related predominantly in time to</u>
XXXIII.	Separation from mother	Fear of failure at school.
XXXIV.	Maternal rejection.	?
XXXV.	?	Family upsets.
XXXVI.	Followed on eczema	?
XXXVII.	?	Quarrels with other boys at school.
XXXVIII.	Death of father	Anxiety about school.
XXXIX.	Followed W.C. and measles.	Parental criticism.
XXXX.	?	?

### SUMMARY

A group of 40 children with common phasic somatic dysfunctions and associated emotional disorder is briefly described in reference to its selection. In some of these cases treatment and follow-ups extended over a period of four years.

Selection was based on -

1. Age limitation. There is a maximal difference of 5 years between the oldest and youngest child in this group.
2. Presence of cyclic changes in somatic symptoms and absence of prolonged spontaneous remissions prior to referral.
3. Limitation of mental ages to within the I.Q. range of 90 to 135.
4. A preliminary observation period from 1 to 2 months for assessment of the associated emotional disorder. Graphic projection methods were used as an aid to the initial analysis.
5. The child's preference for projective painting in the playroom.

Treatment observations have been based on spontaneous serial paintings and associated responses.

## 2. Inter-Group Comparison of Graphic Trends.

### Basic Concepts.

In the endeavour to reflect individual dynamics of emotional conflict earlier group studies have given greater prominence to drawing content and the fluctuations shown through it.

Throughout the analysis which follows equal emphasis has been placed on elements that illustrate changes in the expressed painting trends with regard to structure as well as to content. The building up of individual patterns will be viewed as a fusion of all the previously indicated components, and an attempt is made to demonstrate their interrelation at several levels of functioning, during the course of therapy. No causes are suggested for some of the extremer deviations, which will presently be described, apart from indicating their temporal relationship with observed symptoms and reactions.

The concept which underlies many of the following criteria was originally formulated by Krötzsh (Sect.I.4.). He observed that the kinetic components of graphic structure were being built up by a pair of opposites which showed consistent variations within the limits imposed on them by each individual child. He called these opposites "Bewegungsrythmus" and "Erstarrung".<sup>1</sup> More recently the concept of opposing trends has found entrance into rating methods used by clinical psychologists, such as the one discussed by Elkish (30), who used it in a group of

8 children, whose social adjustment was measured by means of a behaviour rating scale. In the present study this concept has been extended to other aspects of form expression in painting and its validity will be discussed in the last chapter in relation to the available findings. When this concept is later applied to the study of the primary trends it will be shown that the phenomenon of "fluctuation" previously discussed in many cases depends on the ambivalence of these opposites. What is later being described as "variants of primary trends" or "traits", must therefore not be assumed to be separate "factors" which may be isolated at random from serial productions for a quantitative assessment, but rather components which collectively enter into the painting process. They can be looked at both from the standpoint of general tendencies and of traits. When examined from the latter standpoint, they are found to overlap and their discriminative quality is dependent on this. The primary object of this group analysis is to discover types of individual variants to these primary trends which commonly occur and which are of a distinctive nature. By relating these to other psychiatric findings we hope to test the validity of using graphic methods as a part of progressive treatment with children of the mentioned age groups.

- 
1. The literal translation is "movement rhythm" and "stagnation".

Validation.

I am aware of the criticisms which an experiment of this type may invite, when clinical diagnostic criteria alone are employed for an appraisal of personality. At the same time many psychologists would be the first to admit the shortcomings of matching methods in children as a one stage "objective" procedure, for example by means of behaviour rating scales or inventories. It must be remembered that the present method is a longitudinal one, based on records of treatment sessions and made it desirable to maintain the degree of flexibility which it must possess not to become merely a test procedure. Additionally it is based on prolonged contacts with each child, a fact which allowed for a continuous re-checking of earlier clinical impressions.

Others may feel that a "control group" would have been required to obtain a more accurate picture of what is meant by certain qualitative differences between the traits described. This was carefully considered but finally discarded for the following chief reasons.

- 1.) To establish degrees and types of variations the hypothesis underlying this investigation must first be tested in a clinically defined group.
- 2.) It would have been necessary to collect a large enough sample of what might be called typically "non neurotic" children of similar age ranges.
- 3.) Such a group would need to become subject to exactly the same conditions as those pertaining to the "treatment" children, i.e. regular individual sessions allowing for spontaneous painting and associative responses. Painting



series from "art work" in schools would for obvious reasons have been inadequate.

- 4.) A sufficiently large number of developmental studies of school children are available for a normative assessment of drawing items in a pilot investigation, such as the present one.

#### Arrangement of Material and Method of Analysis.

The pictorial sources are 1000 paintings derived from treatment series of the selected group of 40 children with the clinically defined disorders described in III.4. These children attended usually at weekly intervals over prolonged periods. Including follow ups and observation periods their times of attendance ranged from 18 months to 4 years.

In every child's case a separate assessment of 25 consecutive graphic productions was made, approximately covering the period of one year. As the aim was primarily to demonstrate long term fluctuations, the selected products depict, generally speaking, expressive tendencies seen at fortnightly intervals. I was confirmed in this principle of selection by first studying empirically the all over total material in each child and then recording the fluctuations shown in it. As the result of this it was evident that an analysis of weekly paintings would have led to a repetition of exactly similar traits.

- 1.) The manner by which the following separate aspects became reflected in the specific pattern or design of each individual child was studied.
  - a. Kinetic mechanisms.
  - b. Space control.
  - c. Colour attitudes.

- d. Differential use of structure.
- e. Attempts at integration.
- f. Serial fluctuations.

In the analysis of the resulting variants a four-point scale was used. These quantitative findings are contained in table IV. The assessment being done in an identical manner in each case. From these it was possible to get an all over impression both of the relative emphasis placed on the various trends and also of their relative constancy over a period of one year.

Each trend was initially assessed in four separate columns.

Column. A. denoted the emphasis on the trend as well as its general direction throughout the whole series. Where necessary it incorporated assessments of products not included in the representative selection.

Column B. Denoted weak or spasmodic representation of the trend in single products out of a total of 25.

Column C. Denoted that the trend was distinctly present.

Column D. Denoted extreme emphasis on the trend in single products.  
(Assessments in C. and D. out of 25 as in B.)

The subsequent accounts in Chapter 3. incorporate this preliminary analysis. The findings in each group of trends are roughly presented in the following order.

- a. Derivation and definition of trends investigated.
- b. Assessment of relative frequency in group.  
(in conjunction with table~~5~~).
- c. Illustrative examples from individual children treated with the aid of the painting method.

2. A number of variants found to be sufficiently common or sufficiently specific from the standpoint of the individual child were related to - serial fluctuations and verbal associations given in response to paintings, the child's overt behaviour and play responses, reports from informant sources (parents, school, private doctor, visits by workers) about adjustment, cyclic changes in his somatic symptoms.

These findings are recorded by illustrative examples from individual cases. Here the primary aim was to learn something about the mechanisms behind form expression in relation to the child's disorder.

3. Inter-group comparison of variants in relation to type of dysfunction and treatment response. This aspect is discussed in chapter 4. under the heading "organisation of structure".

Table IV. (p.154) represents the final summary of this rating experiment. On it only those tendencies have been indicated which could be considered as extreme in the context of this group, when the serial element (column A.) and isolated products (column D.) in each series were taken together. The 20 components in this table are related to movement, colour, space, differential use of form elements, isolated structure and attempted synthesis.

Table III. on the next page contains a summary of all the reference numbers for descriptive cases. Partly for the sake of convenience and partly in order to show the actual overlap which occurs in practice each of them is designed to illustrate several aspects described. Reference numbers for colour films and paintings may also be found here.

TABLE III.

Reference Numbers for Trait Descriptions and Illustrations.

Trait or Variant.	Case No.	Appendix.		
		Colour Films.	Painting Series.	
		Plate I. I. series.	Plate II. Individ. Products.	A - F.
Fluency.	XIV.XV.XVIII.	4. 8.17.	7. 8.	A.B.
Rigidity.	XIV.XV,XXIV.	1. 3.15.	5.	A.B.
Compression.	XXI. XXXIV.	6	6.9.	F.
Expansion.	XV. XVIII.		7	B.
Differential Space Usage.	XV.	1.3.7.11. 15.	2.5.	
Colour Line.	XIV. XXIV.		5.6.8.	E.
Colour Mass.	XV.XVIII. XXIV.	5.6.	2.11.	B.C.E.
Lucidity.	XIV.XV.	10.11.19. 20.	1. 4.13.	A
Opacity.	XXXX	3.4.7.	10.11.	C.E.
Overlay.	VI.XV.	4.14.15.		C.
Primitive Structure.	XIV.XV.XIX.	1.3.4.18.		D.
Colour Focus.	XIV.XVIII. XIX.	11.15.	2.1.4.	A.B.
Form Focus.	XXXI.XXXIII. XXXV.	18.23.	3.	D.
Automatism.	VI.XXL.XXXIV.	1-4.	6.12.	D.F.
Differentiation.	XIV.	5.6.7.	8.	A.
Disintegration.	XIV.XV.XIX.	6.	8.10.	A.
Summation.	XXL.		5.6.	E.F.
Abstract pattern.	XV.XXIV.XXVII.	1-4 etc.	11.	A.C.E.
Cohesion.	XIV.XV.	23.24.	4.	A.
Realism.	XIV.XV.	27.28.	13.	B.F.



TABLE IV.

Individual Variants (Extreme Tendencies).

	Rigidity	Fluency	Compression	Expansion	Lucidity	Opacity	High C.R.	Low C.R.	Colour Focus	Form Focus	Automatism	Differentiation	Vert. + Horiz.	Primit. schema	Enclos. Container	Overlay	Diff. Space	Synth. Incapacity.	Astr. Pattern.	Summation
I	+		+							+		+			+					+
II	+		+				+													
III	↔			+																
IV	+						+			+	+			+			+			+
V	↔		+												+					
VI	↔		↔		↔			+	+		+							+		
VII	+		+			+		+		+					+	+				
VIII															+					
IX			+						+											
X						+		+		+										
XI		↔												+						
XII	+	+											+							
XIII	↔		+						+				+							
XIV	↔						+		+	+		+						+		
XV	↔						+								+	+			+	
XVI			+	+							+									
XVII									+											
XVIII					+	+														
XIX	↔	↔									+		+	+				+		
XX	↔	+				+		+			+								+	
XXI		+									+								+	
XXII		+																		
XXIII									+											
XXIV	↔				↔	+									+				+	
XXV		+																		
XXVI	↔	↔																		
XXVII	+																+		+	
XXVIII																				
XXIX	↔								+											
XXX						+					↔									
XXXI	+		+						+											
XXXII															+					
XXXIII	+				↔				+			+				+				
XXXIV	+		↔									+								
XXXV	↔					+														
XXXVI	+	+					+													
XXXVII	↔	↔							+	+									+	
XXXVIII	+																			
XXXIX	↔	↔																		+
XXXX						+			+						+					+

Excessive fluidity of elements and is of structure or quality



## PRIMARY GRAPHIC TRENDS AND THEIR VARIANTS.

### a). Trends Related to Kinetic Mechanisms.

The terms adopted for the first pair of opposites are "fluency" and "rigidity". Their starting point, as far as this can be ascertained from drawing behaviour and earlier studies, lies at the age of roughly 18 months. From then onward they can be traced through the periods of early and later socialisation. Their manifestations are purest in the very young, as later the rhythmic element in them is overshadowed by other tendencies. However, the fluency-rigidity opposition remains dominant until the arrival of the schema around the 5th year when the need for movement somewhat lessens. Thereafter fluency-rigidity will become a component of form expression.

#### Definitions.

Fluency. Continuous movement of brush stroke and its graphic equivalent. The quality of continuity is stressed although the stroke direction may vary. Increased or excessive fluency as a deviation from balanced control of innate rhythm means uncontrolled or excessive movement, leading to partial or complete dissolution of structure or whole design.

Rigidity. Interrupted quality of brush stroke and its graphic equivalent. The quality of break or interruption is stressed and structure is built up of short stroke-elements. Although all-directional tendency of stroke is commonly seen, the areas found are of limited size. Excessive rigidity means a complete absence of rhythmic elements and is exemplified by a rigid or static quality of structure or whole design.

Variants. See Table IV.

Extreme fluency in line, shape or whole design was found as a temporary feature in 4% children of the group. It was, thus, one of the more common traits, shown in conjunction with a variety of other extreme variants. Generally speaking it may be considered as an indication of the child's effort expended in maintaining or releasing his control exercised over his stroke behaviour. Up to the age of 4 at least, extreme fluency as a persistent feature might be considered to depend on the acquisition of finer manipulative skill and might therefore be expected to predominate. But this was not found when contrasting the age group under five with that of over 5. Even amongst the youngest children the emphasis on fluency or rigidity was more closely bound up with the types of painting pattern set up by the individual, than with his age. This was also noted when the child's stroke pressure was considered. In the older group it was interesting to note the manner in which kinetic mechanisms merged increasingly with other graphic trends, particularly colour and space emphasis. Where colour elements predominated it was in those series where fluency had come about more or less suddenly following on previously rigid patterns. The dominant colours here were either strongly opposing trends (red, against blue, yellow against black) or a limited range of primary colours (esp.

red, yellow, or blue). Another serial feature of particular interest was the child's attempts to compensate in other ways for prevailing rigid elements, without achieving true fluency. Here the brushstrokes did not extend over a wide enough area of the painting page. Instead of true fluency large or medium blots or areas accumulated through repetitive to and fro movement, covering the same space many times over. In some children this was an intermediate stage to greater fluency. In those cases where extreme fluency became apparent as a phasic manifestation during therapy, it was as a rule followed, by more abundant verbal associations and projected fantasy and in many cases also by more outgoing and aggressive behaviour.

#### Rigid Elements.

of An extreme type appeared in the nature of interrupted strokes, smaller isolated areas or of general loss of continuity in the picture or design. The prevalence of cut off verticals was often seen in connection with the static quality of the whole picture. In a number of children extreme rigidity was associated with a persistent clinging to the early schematic representations. During treatment-interviews this often coincided with poverty of associated content and sometimes repetitive content, but not invariably so. At all the age ranges extreme or increased rigidity was frequently associated

with separate forms such as small blots or dots and cut off or interrupted lines. Emphasis on more opaque colour elements especially blue and black was common.

### Usage of Space.

Data about the developmental significance children's space usage are scanty, but recent work (5) seems to suggest that primary trends here appear early, probably around  $2\frac{1}{2}$  years, which is about the same time when children first differentiate between colours. These

trends are concerned with the urge to expand or contract and can be clearly seen in the first graphic attempts of very young children, who are presented with a limited space, such as a painting page of controlled size. As the concept of expansion and contraction underlies many of the child's early behaviour and adjustment manifestations, it is possible that the usage of space in painting may be an indicator to the individual's mechanisms of adjustment to environment. In a search for criteria use was made of these two opposites in addition to a third factor, which seemed of considerable interest, although probably not directly related to expansive or contractive trends. This is the individual's differential approach to the available space, his mode of dividing it into sections and placing into these objects to which he attributes meaning. This factor of differential space control is separately discussed. Its distribution within the group becomes apparent in Table IV.

Definitions.

Expansion. Denotes the child's persistent tendency to work beyond the limits of available space, through stroke direction, single structure as well as whole design.

Compression. Denotes contraction of either structure or whole design in relation to available space. It may also imply crowding of an excessive amount of detail into the available space.

b. Variants related to space usage.

Persistent as well as exaggerated emphasis on space, in one way or another, was seen in 15 children of the group. The following variants were relatively common.

1. Expansion as a trend affecting the whole or part of the picture.
2. Marked compression by means of
  - a). diminution of part or whole of design,
  - b). crowding within available space,
  - c). artificial limitation of space
3. Various types of selective space utilisation.
4. "Page filling", which may be ~~now~~ an "expansive" or "compressive phenomenon".

Observations about spatial usage must take into account kinetic elements and type of brush chosen. It was a striking finding that the large majority of the younger group of children selected the largest brushes available, yet a lot of them repeatedly or throughout their series show compression.

In older children who had the urge to paint beyond the limits of space available the trend was at least partly related to increasing fluency. But in others expansion could also be seen with more rigid forms.

Expansion, was less common in the group as a whole. It frequently occurred near the second half of



a series in common with increasing adjustment, fantasy, release, and symptomatic remission, in children who had formerly shown much repressed anxiety. The phase when expansive trends became manifest also coincided with more outgoing relations within a group. In these children it may therefore be said to be part of their adjustment mechanism and may be taken as a "release phenomenon".

In a smaller number expansive tendencies were present from the outset and recurred during episodes of restlessness and disturbances of personal relationships. In these disorders aggressive trends were possibly on a deeper level and in two of the cases it occurred in the presence of epileptic tendencies. Fantasy projection here was very much less in evidence.

Compression, as a distinctly recognisable trend was more noticeable. It either occurred in children who were very inhibited and was followed there by increasing expansion. It was also evident in several children with a severer type of emotional disturbance, where it was invariably based on artificial limitation of space or on very marked crowding together of objects. Diminution of objects or whole designs, was strikingly and persistently seen in only three cases, all unduly repressed children who had to conform to strict standards in the home. The "compression through crowding" effect has its origin in several causes. In some cases it was clearly related to the extent of space utilised and is therefore related to

the differential right left approach (e.g. case XV), in others it was based on the compulsive urge to repeat the same objects within the limited space and must be looked upon as a feature of automatism. (e.g. XXI). No comprehensive deductions can be drawn from "page filling", also a very common tendency. It may be said that in the majority of children it often coincided with fluency. In children with an aggressive outward drive it formed a preliminary stage to overpainting.

#### c. Trends related to Colour Attitudes.

##### Colour-Form Trends.

As stated in "Developmental Trends" (Section I) the ways which children use in structuralising colour are probably to a greater degree than any of the other trends related to constitution and development. Hence we would expect this factor to have little discriminative value in the assessment of more transient disturbances. The only exception here is a trait which has been described in this study as "overlay attitude". Although it might originally be considered as related to the above trends, it is closely bound up with spacial attitudes on the one hand and with specific associations on the other. Because of this it is discussed under the latter heading.

Definitions. The following two attitudes may be considered as opposing trends.

Colour-line. Here colour is predominately employed as line to portray structure.

Colour Mass. This appears to be a totally different mode of creating form. Colour is used to produce an expanding mass, which may or may not assume representative shape.

Variants. As separate aspects these were not significant in the group as a whole, but only through their relationship to other components. Colour-line was more common in conjunction with rigidity. Sometimes it was followed by "form filling" which is often a transition stage from colour-line to colour mass. Here colour is filled into previously indicated circumference. It must also be remembered that with increasing formalism past the 7 year level colour line is a more frequent phenomenon in the normal child.

#### Differential Use of Colour.

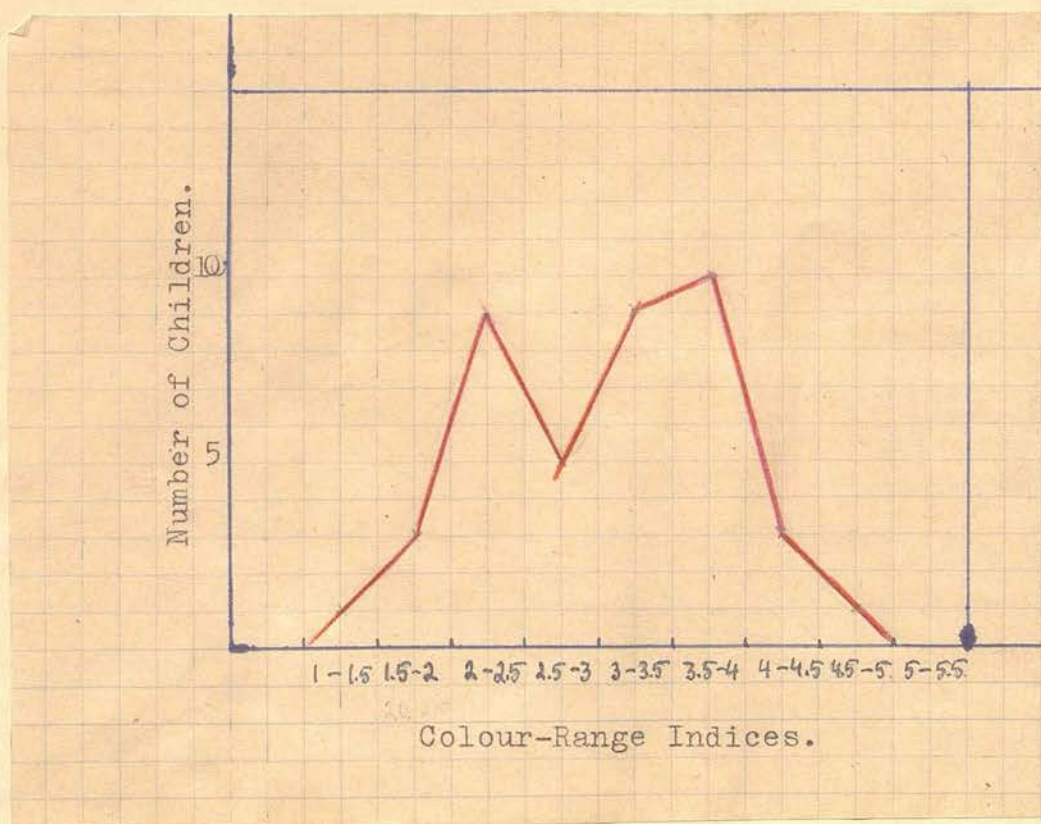
Persistent trends in colour-dominance are, on the whole, extremely difficult to evaluate. In children up to 5 years of age they are less likely related to colour naming. From then onwards choice becomes determined by factors which, even in an individual series, are difficult to assess. With this in mind a preliminary survey of certain colour trends was made.

1. An empirical impression was first gained about differential colour usage in an all over total of 2000 paintings.

2. The meaning of selective colours was explored with the aid of verbal associations. (See section II.2. and Section III.3.f.) Associations given essentially in response to structure ("form-focus") and associations predominantly

related to colour ("colour-focus") were the two main categories. (See case examples under III.f.).

3. A quantitative assessment of the "colour range" throughout each series of 25 paintings was made, by counting the number of times each of the 9 colours was used. The total from each child was divided by 25, giving the "index of colour range." These varied from 1.3 to 5.1. Their distribution within the whole group is plotted in the curve below.



It will be noted that this curve has a bimodal distribution. The most likely explanation for such a deviation would seem to lie.



a. in the inequality of the sampling within a group of such a small size i.e. the relative predominance of children under 5, compared with those of over five and insufficient coverage for the intermediate ranges.

b. The relative predominance of extreme colour selectivity.

The interpretation of this curve would, therefore, mean that these colour indices have been affected by developmental factors as well by specific deviations which spring from the childrens' personalities.

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#### Criteria and definitions.

In all the aspects studied it was found that emphasis centered on the difference between warm and cold colours (and their substitutes and equivalents) rather than on single tones. In this context it was significant how certain colours of the primary range, and also black and white, became combined. Another striking finding, which will be enlarged upon later, is that the character of a colour (in particular black white, red, and perhaps also mauve, can never be fully revealed in its objective appearance. In view of the fact that certain colours, such as blue and black, blue and red, black and red, yellow and red or mauve and blue, frequently occurred in



combination, the selected criteria dealt with as these opposing trends rather than with single colours.

Definitions.

Lucidity, refers to either the persistent or prominent use of isolated elements in the primary range such as blue, yellow, red and green, or too persistent emphasis on unmixed contrast colours in combination of two of the above.

Opacity. Denotes a considerable diminution or absence of primary elements and the prominent or persistent use of mauve, brown, black and white, including mixing effects resulting in these tones.

The following variants, are briefly mentioned here, although the meaningfulness of the dominant colours, was largely determined by the child's verbal associations with them.

1. Persistent emphasis on opposing elements such as blue and red, black and yellow, blue and yellow, was often associated with increased or excessive fluency and also fantasy release. All these children showed more marked fluctuations in their overt emotional behaviour than children in whom opposing elements were less emphasised as a serial phenomenon.
2. Limited colour range, refers to the predominant use of one single colour or not more than two colours in combination in single items or part of the series. This was much more common in the group of children under 5, but it occurred in several others over 5 (e.g. 40) where it was related to the emphasis on opaque muddy colours or overlay.
3. Persistent emphasis on black was commonly found in relation to specific structural emphasis or overlay and like emphasis on red has been discussed under 3e.

4. Persistent use of blue occurs more often as a phasis feature especially in subjects who at other times had shown emphasis on opposing elements. During these phases rigidity or greater control was stressed.

d. Trends related to Structural Differentiation.

The time at which a child becomes consciously aware of distinct shape in his drawings probably closely coincides with the stage of graphic development when he discovers his own "graphic sign", "formula" (Eng.) or "schema" by which "images are identified" (93). These schemata have certain characteristics in common. They are one-dimensional, commonly linear and, later on can be repeated with ease, even under stress. Although there are enormous differences between individual schemata, in their most primitive stage they bear little resemblance to the ways in which objects appear to an adult. But with progressive maturation various children to a varying degree discard their schemata and differentiation begins.

This period of metamorphosis is characterised the child's tendency to practice over and over again the skills with which he is already familiar. Initially some workers considered automatic graphic behaviour a sign of degeneration, but in reality it constitutes a phase of development of a varying duration. Some children seem to have a somewhat diminished capacity to differentiate and go on practicing for longer. The relation between various automatic trends

and maturation on the one hand, and individual personality factors on the other have never been clearly defined. Excessive automatism may constitute an abnormally or sign of retarded development and is commonly seen in the mentally defective, schizophrenic or post-encephalitic child. Yet, under emotional stress all children react by various degrees of dissociation and their automatic graphic behaviour may operate in several ways. Very early on it may lead to repetition of single lines or dots, later of parts or wholes of shapes, finally the whole picture, its content and to the range of objects which the child has at his disposal may be repeated many times over. . Like all the other trends, automatism and differentiation, can therefore be studied long before the schema is established, probably around the 3rd years.

#### Definitions.

Automatism, in its literal sense means graphic structuralisation with partial or total absence of attention. As the attention element cannot be assessed objectively in young children, the criterion must solely rely on repetitive appearance of graphic structure with reference to single elements and shapes, individual schemata for object-representation, repetitive use of isolated objects and the whole design over prolonged periods, and also repetition of content.

Differentiation implies the ability <sup>to</sup> break with the schema, introduce new aspects of objects derived from observation of environment, and a greater complexity and variety of isolated elements, whole design and content.

#### Variants in Differentiation.

The findings in this field are the most difficult to evaluate and observations here are far from complete. The number of graphic phenomena related to automatism and

differentiation respectively are not so immediately apparent as in other aspects of the painting process. They are dependent on conceptual, emotional and inborn personality factors related to all the levels of emotional functioning.

A preliminary analysis was carried out with regard to

1. primitive formal elements
2. perseveration with schema
3. repetitive or differential use of single objects beyond schema
4. whole design and content.

In illustrating this complexity one cannot do better than contrast two series with regard to their object range. They are No. XIV and XXI. They are presented here because both children were of exactly the same age (6) when treatment commenced. The former (I.Q.117) is a boy with severe recurrent asthmatic attacks, a rigid and seclusive personality and frequent periods of extreme fear associated with explosions or fire. He has shown a remarkable improvement in his somatic symptoms. Although still under observations, he has now been free from attacks for over one year. The latter is a girl (I.Q.123), originally referred for what was described as "a mild anxiety state with spontaneous movements." This child in fact showed considerable phasic anxiety, but in contrast to the former case this was not localised in her imagination to specific objects. She apparently made a quick improvement, but was kept on largely because of the unexplained stereotypy in her painting pattern. It must be understood that the following comparison

merely refers to the number of objects appearing in each of 29 paintings (covering a period of roughly one year.)

<u>Case No. 14.</u>	<u>Product.</u>	<u>Case No. 21.</u>
rings, letters, lines (horiz. and vert.)	1	girl, boat, house, crowded colour areas.
postman, boy, mother, rings, door.	2	girl, boat, flags, birds.
stars, decorative dots	3	girl, boat, flag, tree, house, birds.
dog, dog kennel.	4	house, boy, girl, mummy, birds.
houses, writing, masses of colour.	5.	birds, tree, girl, ship.
trees, hut on fire, sun, girl.	6	two boats, two houses, two girls, two boys, lettering.
trees, lady.	7	girl, boat, house, birds.
room, windows, bed, two people in bed.	8	girl, house, boat, flag, letters.
barn on fire, rings	9	house with smoke, tree.
people, sailor with umbrella.	10	rain, house, girl, cushion.
bomb hitting house, prison, verandah, stairs.	11	woman, girl, ship with flag, birds.
table, family of three,	12	three people, crosses, birds, house.
hoses, firemen, another man.	13	flowers, dolls, pram, flower pot, cupboard.
boy, boat, lifebelt, flags, cabin.	14	flowers, dolls, pram, flower pot, cupboard.
house, black man, lines of various kinds, bomb, baby, house, window.	15	girl, house, rain.
crocodile, "car of teddy", fire, gas.	16	girl, house, scooter.
bed, lady in it, rows of dots.		
Man on fire, man running, bomb.		



<u>Case 14</u>	<u>Product</u>	<u>Case 21</u>
boat on river, rocks, man oars.	17	table, girl, skipping rope, birds.
ship, under bridge, man, smoke, sun, river.	18	girl, mother, scooter.
animal, fence, trees	19	girl in rain, scooter, birds.
cowboy, riding horse, gun bridles.	20	abstract pattern divided into two areas.
butterfly, lion, man with butterfly net	21	boats, birds, sun.
school house, class, window-boxes, teacher, pupils, blackboard.	22	girl, scooter, house.
ship, two people, sun, icebergs, towing rope, bomb	23	rain, girl, scooter.
Total: appr. 60	Year.	Total: 18.

When these two series are seen side by side the contrasts are far more striking than indicated here. The boy showed increased fluency for at least part of the time, strong

emphasis on opposing colour trends, considerable ability for differentiation both in respect to his objects portrayed and the meaning behind them. In the later stages of the series he remained unaffected by the dimensions of the painting page and achieved some degree of integration in relation to the meaning and structure of his pictures. Where there is perseveration it occurs in relation to specific emotional fixations which became projected, passing through successive stages of symbolisation. In the girl true fluency was never established, purposive colour differentiation is lacking, her object range remains limited

to stereotypes both in single products and in the whole series. Projections occurred, but these showed no clear relation to structure did not pass through transformations and remained static. She is severely limited by the space factor so that crowding takes place. This diminished during the second half, but even there one gets the impression that the "rain dots" and similar features are an equivalent of the earlier "compression". Her later history is as follows. She had no panic attacks for several months and seemingly made a good school-adjustment. When coming for psychiatric follow ups one had, in spite of the mother's good account, the impression that she was always on edge. Beginning of autumn 1950 her father one night returned home after his leg had been crushed in a machine. The girl witnessed this and became sick soon afterwards, said she felt faint and wanted to go to bed because "everything gets jumbled up in my head". Next morning the mother took her to hospital "to see what the stomach upset was about." Before the girl reached the doctor's room, she had a typical epileptic convulsion in the front surgery. E.E.G. examination indicated any epileptic focus in the right parietal region.

It was evident from the study of the total material that in the structural field automatism and differentiation operate on several developmental levels. On the lowest automatisations and differentiation of movement could be brought in line with primitive stroke and shape, roughly

between 18 months and 4 years. Of importance here were the consistency of stroke direction (i.e. if predominantly vertical or horizontal) and "circular tendencies" such as ring-forms, container patterns or dotting.

The second stage was related to the typical schema for object representation, especially the schema for the human body, but also not uncommonly the house. Several varieties of the cephalopede could be observed apart from the commonly described one. It came up at times in conjunction with ring forms. Amongst some older (7 years) children the house schema became subject to simplifications which resemble houses drawn up 3 or 4 years olds, consisting of a triangle without windows or chimney.

Horizontal and vertical trends could, in the older child, only be studied satisfactorily in the abstract pattern-design, and it is therefore doubtful whether these trends represent a parallel to younger age groups. Generally speaking vertical tendency in stroke direction in the younger child seemed to occur with greater rigidity and lack of adjustment. It seemed the more primitive phenomenon. Circular or horizontal trends were more common in the later half of the series of the young children who were adjusting.

Circular trends on the other-hand were not common in all groups, either as simple rings, discs, dots, container patterns or more complex structures. Their real significance is far from clear but two kinds of observation are offered.

Persistent circular trends of several kinds occur in 1,2,4,5,8,13,14,16,17,20,21,24,37. All these children stood out initially by a tense and rigid behaviour which often turned into overt aggression with release of fantasy during treatment. In some of these there is also evidence of "regression". In many these ring forms largely disappear when greater fluency set in. Few associations were obtained while they remained in this "ring stage". This might suggest that

A). persistent ring patterns stand for a superficially conforming, but rigid or withdrawn attitude in children who found it difficult to make contact with their environment.

b). these patterns may also be looked at as a type of regression which is less overt than one shown through representative structure.

2. Strictly speaking elements represented by "primitive schema" could only be described as "regressive" in an individual where the schema has been discarded previously. Its persistent usage would therefore only be of significance in a child of above 6 years of age.

e. Associations with Colour, Structure and Design.

"Association" and "projection" was defined earlier.

In relation to graphic structure there were three different possibilities for such responses to become "fixed".

a). Through specific areas in successive paintings where an intensely personal aspect emerges directly via

the structural features. Associations here produced confirmatory evidence of emotional fixation to these areas. Projections of this type seemed to have relatively great stability. (See Cases XXXI.XXXIII. XXXV).

b). Where structure itself has not given unequivocal evidence of such fixation, but form or colour elements suggest it. Exploratory conversation based on spontaneously verbalised responses may bring about valuable associations.(No.XIV.XV.XVIII)

c). Associations with any painting, whatever its form or manifest content, may at times, result in significant material. But here great care must be taken to avoid suggestions to the child.

From this provisional classification an aspect emerges which I believe is of some importance in understanding the meaning and function of projection into graphic structure. It is the finding that there are zones in childrens paintings which contain the nuclear elements of a preconscious emotional fixation, amongst other areas, which may be shown as the series progresses, to be less specific. From the material available I have formed the impression that these fixed zones may not be subject to quite the same fluctuation than other features and that their recurrence after they have been discarded is sometimes dependent on fantasies connected with recently lived through experience. (e.g. Case No. XXXIII). Descriptions and illustrations are now given.

Colour Emphasis. The colours most frequently used with association-responses were black, white, mauve, and red.



Persistent emphasis on black, especially when related to the human figure and to overlay was often striking. Children tended to verbalise more detail into black than into any other colour. It is, therefore, thought that black, even when not used as overlay, may stand for something essentially similar to it through its opaque veil function, which often had an ambivalent character. (See Case XV).

Persistent use of white was uncommon, possibly because most children realised that it could hardly show up on a white background. Three subjects used white very frequently for human figure projection having been quite aware of its tonelessness. They were all very disturbed children. (See Case XXXI).

Persistent use of red was apparent when other transparent or intense colours predominated, such as yellow, or else when red became a contrast colour to blue, mauve or black. As a projective colour it seemed meaningful usually during a phase only and related to projective responses that were fluctuant (Case XVIII). Generally speaking, associations based on red commonly included objects representing power to the child (fast cars, ships, engines, aeroplanes, guns), human forms in motion or conflict, (running, fighting, falling, dying), destructive phenomena (fire, explosion, "atom bomb") fantasy figures (witches or exotic animals) and certain primitive shapes (balls, rings). It is noteworthy that

black in some children could replace red for any of these.

In a number of series emphasis on, or avoidance of overlay was of considerable persistence. Either a darker element is superimposed on a lighter one and through it both shape or colour can be expressed. Overlay can also be used, even in the older child, to achieve a mass effect. Sometimes more luminous colours overlay opaque ones. Other children carefully avoided overlay in any form. Some children who persistently overlaid colour showed prolonged and pronounced emotional difficulties. The common factor here appeared to be that their overt behaviour covered strong emotions that found release through fantasy projection, but also through rather disturbing patterns in their adaptive behaviour. Three cases are quoted to illustrate this (VI. XXXX. XV.).

Projected Body Fixation.

At some stage probably all children make reference to parts of a human figure which they have painted or drawn. When this is further explored one finds that they sooner or later lose interest, and that the actual body functioning, the illness that might develop in it and the good or bad feelings for its parts are not followed up. However, amongst many children with prolonged somatic dysfunctions, this was otherwise. They often produced a great deal of projected material related to body function, persisted with it and wished to have it re-analysed. It came up spontaneously, often through structural emphasis on their human figure schemata. Furthermore much of the material created around

these was related to body functioning as well. The process by which these somatic projections gradually emerge in serial work is a most subtle one and built around other and more overt personality traits. What has been interesting was that the link between the former and the latter came about through a specific somatic fixation, which persisted for a time and remained absolutely personal to the individual. No two asthmatics, for example, revealed exactly similar projections, yet a specificity existed in so far as feeling of fear guilt, violence, or else protection or value remained fixed to an often very limited area of the painting. The simplest illustrative example is the human schema of case XV, (tracing appended here),

drawn during his 10th interview. He was asked to "draw somebody" and in response he made three figures, quite similar in appearance, but different in size. The central one he described as "Humpty-Dumpty", the left one as "an ordinary man", the right one an "ordinary boy". They are not body schemas as commonly drawn by children of that age, but they have large mouths with a vertical line inside which he called the nose. They have no bodies but only necks, strongly emphasised through shading. The necks finish abruptly where the arms begin. This is indicated by a horizontal line. When we analyse these figures with regard to their chief formelements, it becomes clear that enormous stress is laid on the mouth-nose areas and the regions of neck and upper chest. The rest is only indicated by single line. Now to the associations. (Abbreviated).

"This middle one is Humpty-Dumpty who sits and always falls off. The one on the right is Mr. Jacks, he is 19, he goes to work every day, and when he comes back a blackbird picks off his nose. He has to get a new nose all the time. (I seen lots of blackbirds that nearly pulled off my nose). Mr. J. brings home food in lots of boxes."

(Wife or children?) "He lives with Mrs. Jacks, but nobody else, or a girl perhaps. Don't know if he is there now."

(Parts of body?) "The worst part is the top of his head,

the best part I have made black. He has had an operation there, they put him to sleep for a long time, then cut open his neck, to make it better."

(Allright now?) "Yes, but sometimes can't get his food down."

(There were no replies at all about the boy on the left).

The projection of children's feelings into graphic representations of body parts is illustrated by 3 further examples from painting series. In each case a different part is chosen. In XXXIII it is the face, in XXXI the trunk, in XXXV the hands.

Case No. XXXIII. (see colour plate II.No.1.)

Amongst the initial series records of an intelligent but hypersensitive girl of 9, treated for severe recurrent eczema, which at one stage required admission as an in-patient, a single human face appears inside a field, usually painted green. Following the disappearance of her rash after about 8 attendances, she lost the habit of painting a face without body and went back to the usual human figure scheme. One day, when she looked over her earlier pictures she spontaneously said, "that is the boy who always looks at me when I am asleep." These earlier products and to some extent all her paintings have indeed a dreamlike appearance, and the face shown repeatedly in them seemed an intensely personal matter to her, but she spoke no more about it. After treatment was discontinued she came at intervals up to the Clinic. On one occasion during that time she had a most upsetting experience. After playing on the common with her friends, they found the corpse of a man nearby. Only one week afterwards her eczema had reappeared, though only slightly, around the flexures and in her face. The pictures done in this period also showed a recurrence of structural elements similar to those shown in the beginning. Her attention was not drawn to it, but she admitted it herself after she got better and her style had altered, expressing surprise of "how silly the other things now look." We then went back to her first phase and she explained about these structures, "I think I must have painted something I always felt frightened about", then she went on to her second eczema period pointing out some of the areas to me, "these look like the face".



They were roundish colour masses, which during the actual time of creation sometimes stood for "ponds" or "clouds" and at other times for "a very large face". In her usual painting she carefully avoided to overlay colours, but with these she put dark tones over yellow or red. When one studies her other representations, for example, animals such as chickens which she liked to paint, it can be seen that their body was invariably commenced with a similar round mass and that these round bodies occurred together in the same picture. They have now completely disappeared.

Case No. XXXI. (plate II.2.)

In a series of 21 products painted by a very anxious boy of 8 with recurrent asthma and enuresis, white (on white ground) is used 7 times for the human figure. He was aware that white would not discriminate on white paper, and therefore such a purposeful and selective colour choice requires some other explanation. Except for their dark hats, these figures are almost invisible. Their time relation to an asthmatic attack and its aftereffects, (i.e. period of continued wheeziness of from 24-48 hours,) remained fairly constant. These figures appear always in outsize, invariably on the left side of the page. Sometimes there are two human figures, but one only in white. In his series never more than two people appeared together. There are other persistent and striking features with regard to them. Human shapes of two kinds can be seen, one a rather schematic representation, of a size appropriate to the sheet and the other objects. The other is usually of enormous size, either with large hands and long fingers, or no hands at all. They are described by him as "policemen", "uncle", red indian "shooting at someone", etc. He seemed very obsessed with these large shapes and, after he had done one, he became excited and showed it to me, but would not say anything about it. A little later he painted, as usual, a large white man on the left (called policeman), to his right he placed a thin blue man and said, "He's just been run over by a car". I asked why the policeman standing so close could not have saved him. He replied by saying, "this boy has such a thin body, he just fell on the ground." When we returned to his earlier work, he recognised that in all his large figures he had indicated the trunk through a line only and said jokingly that they would find it all a little difficult to stand up. Following this I asked why all these men must be so tall if their trunk is so thin. To this he replied that it was thin only in the painting, but "their bodies can grow big like a balloon". This emphasis on the expansive ability seemed linked to his breathing function because when asked how they did it to grow wider, he said, "by breathing in all the air around them".



Case No. XXXV. (Plate II.3.)

A girl aged 11, who has pronounced mood swings, steals, truants and is generally maladjusted. Her father is an epileptic and alcoholic. She painted from time to time extremely heavy looking objects either being pushed along on the ground by someone, or lifted up, or just floating about, when she was in her difficult moods. One of these pictures shows "an apple tree and blackbirds in the sky". To its right stands "a man with iron weights on his hands who is attacked by the blackbirds". There is also one with weights on his feet, who is supposed to climb the tree to collect the apples". Although she admitted the absurdity of this, she said it must be like this because these large weights are meant to show how strong these people are. She recognised the resemblance between these and other round masses in the series, but put a different meaning into them. "They are things that have been robbed or stolen and must be carried away." All these people are in a lot of trouble." These objects must be considered as contact features with the outside world which project her feeling about adjustment.

Case No. XV.

This case is described in Section II but attention is drawn here to the initial persistent projection into the tree structure which becomes cut off and eventually reveals itself to be related to body feelings.

There were a considerable number of other examples where special areas in pictures became invested with emotional significance, without verbal association. In the next example I wish to refer to the persistent swing of contrast colours seen in a young child, and the uses he makes of overlay.

Case No. VI. (Appendix D.)

A boy of nearly  $4\frac{1}{2}$  with severe outbursts of temper. After such an attack he goes rigid, with staring eyes and partial loss of consciousness. First attack at 18 months E.E.G. record strongly suggestive of epilepsy. Attacks seem to occur in monthly phases, before and after attacks he is most "difficult". No constructive play of any kind, but will smear colours in brush painting. During each session when he played with paints he made a series of 4-5 products, which show a colour selectivity

too persistent in character to be entirely accidental. Two chief types of colour usage were seen. One when he endeavours to express chiefly forms of rather primitive structure, here the dominant colour is black. The forms are called by various names such as, "big bombs on planes which kill you" or "policeman with knife". The other pictures never bring up verbal associations, but show a systematic use of contrast colours and overlay. In them we see a continuous interplay between transparent and opaque tones, the lighter tones usually gaining greater weight in the final products of the series. This process of overlaying first light by dark tones and later this dark overlay growing progressively less in size, seemed to have a calming affect on his motor behaviour.

This type of phenomenon raises the question of the projective value in the colour-structure element in children up to 5, and in particular the meaning of constant overlay. The above example may give us certain clues. In the one type of product the boy makes use of colour mainly or exclusively in a kinesthetic way, he attempts to balance opposing trends both in colour and movement. His movement is aggressive and expansive but he manages to cast it into a circular stroke pattern in the end, after this struggle between colours has somewhat died down. But even in the last painting black is still required to cover part of the bright red surface. In the other type of product he projects aggressive fantasies ( ) s into very primitive structure and has the urge to say what this structure means. But the colour here is black throughout, although the fantasies deal with aggression or killing. It seems therefore that both types of painting style have a specific projective significance. The use of overlay has a personal meaning

to a child who constantly<sup>em</sup> employs it, as already evident from case No. XV. This is once more demonstrated by the next child.

Case No. 40. (Appendix C.)

This boy of  $7\frac{1}{2}$  was treated for persistent enuresis from birth, sleep disturbance and backwardness at school. He showed a complete remission without further recurrence of his symptom after three months of attendance. Concurrent with the onset of improvement in this enuresis this subject developed a persistent and rather unusual overlay attitude, which reached its climax at a time when he was not actually wetting any more. Finally it was discontinued quite suddenly. The purpose of his overlay was evidently to avoid showing intense colours, such as yellow and red. Whenever he had chosen to use a light colour and applied it to the paper, he immediately covered<sup>it</sup> with grey (specially prepared by him) or some other muddy elements. The only colour which he allowed beside these are blue. It became increasingly obvious that the greater the actual smearing of muddy colours, the greater his satisfaction and the less inhibited he became. At home he was never punished for his wetting, but during treatment he revealed much disgust for excretory function, chiefly derived from parental attitudes.

Here overlay seems to fulfil two functions. One is the covering of the intense and emotive colour elements, as seen in other cases. The other is the projection of specific feeling tones about a somatic process into the covering elements, themselves. Like the above, many childrens' pictures are devoid of the recurrent structural projective focus, they nevertheless show a constancy of projection, that frequently arises from specific colour choice or usage of space, such as the following.

Case No. XVIII. (Appendix B.)

This is an illustration of the persistent association between strong contrast~~x~~ colours or red and aggressive and destructive fantasies. A short selected but consecutive series of this child's original paintings

have been enclosed with the appendix. He was an extremely productive child and painted these pictures in addition to other series on the standard sheet. These products (1-15) cover the period from middle of November 1949 to October 1950.

He was 6 years and 10 months old when first seen at the Clinic, after a referral from the school medical service for persistent nocturnal enuresis, tearing of bedclothes during sleep and night-terrors. He was a first born child and there is a sister aged 2 (both Caesarian births). He was breast fed for 12 months. Excretion was never controlled at night except during short periods when the boy went away from home to stay with his paternal Grandmother. His mother is an indulgent woman who avoids responsibility. The father, a dominating and insecure person had a severe upbringing as a child and still has the tendency to copy his own father's style. He is very angry about the boy's enuresis despite the fact that he himself was an enuretic until he was 14. Until coming to the Clinic the child was thrashed for the wetting. The boy is lethargic and shy in manner and is easily reduced to tears. Already at the first interview it became apparent that he had a vivid imagination, as he freely related dreams and became soon absorbed with aggressive play. This aggressive element, though absent from his demeanour, is strongly represented in his dreams, play fantasies, paintings and associated responses.

In these it became progressively revealed through the strong link to intense and contrasting colours, especially red and black. Without going into much detail the following rather persistent features may be observed. Associations were given most frequently with red and black. In both cases these dealt with, fighting, killing, cutting, stabbing, and burning. There is a persistent use of certain structural implements such as choppers or swords. This was equally well shown in his human figure drawing.

Examples among many others, are

No. 3. "The indian is trying to chop the blue man's gun off."

No. 5. "Two people sword fighting"... Those people don't kill each other. The indian takes the cowboy right up into the mountains, ties him up and lets the crocodile eat him."

No. 7. "Here he associated mostly with "chopping") "I like people chopping, I think it's fun. I see them in the pictures with choppers. My daddy might have a chopper. He used it in the war to cut



peoples heads off, but I wasn't alive then. My mummy said to me, you know, your Daddy used to chop peoples heads off, he might chop your legs off... This don't make sense, I can't find no sense in it. I don't know why I said it. I like using a sword best. You could creep along the ground and they might not hear you until you had struck it into them."

No. 10. (Represents a dream) "Three naughty men, they did not like us. They came to conquer England."

Although parental co-operation couldnot be obtained, the boy showed improvement after about 6 months. (About 50% dry nights). In the later part of the series there was a change to less intense colours, but No. 14 for example (abstract pattern) still shows formal elements which in shape resemble the "choppers" previously painted.

In a few cases the emotional disturbance and the associated physical symptom were related to a specific conflict which became projected into the painting pattern. The next child illustrates this fairly well.

#### Case XXV.

This 6 year old boy showed an increasingly severe constipation, passing one motion in about every 10 days. His mother a powerfully built and well meaning woman, in her efforts to do the best for the child, decided to tell him the "facts of life" at an unusually early age. She did this when he was about 3 by means of a practical demonstration pointing out to him a friend of hers in her last month of pregnancy. Using her as an example she described to him the ways children come into the world. From the mother's report there was little doubt that the child had actually been given all the facts. Soon he began to ruminate about the reason why the baby was to remain inside the "stomach" for so very long. This made him anxious and the onset of his constipation was related to fantasies of keeping the child inside the stomach until it could be born. At the same time he became most spiteful and aggressive against his mother.

He enjoyed painting and during the first few sessions produced a number of pictures ( ) which illustrated part of his problem. They were exceedingly neat and clean but only outlines are indicated in them. In one of the last ones birth fantasies are illustrated as clearly as a child of that age will do this



spontaneously. It shows a tunnel going into the ground, with a "mummy animal" and "two babies" in it. The mother is seated on top of the two. His reason why the babies could not come out of the tunnel into the sunshine was "because they can't walk out by themselves, she has to put them out. But they are only sometimes allowed out like all babies." Then he talked about their feeding. "The mother takes the food to them then takes it away again when it's finished. After they have eaten the food, they will have other babies." At that stage it was explained to him that food did not turn into babies in the stomach, but that babies were kept in quite a different place and not at all the same place where the food was being kept. He seemed satisfied without however showing a trace of emotion and there was not the slightest change in his symptoms for some weeks to come. Real improvement set in about the time when he quite suddenly and spontaneously discarded his earlier clean manner of painting and went over to abstract pattern-designs of a fanciful kind, in which colours were thickly applied. He obtained obvious pleasure from mixing these colours. This painting behaviour was also followed by a marked improvement in reactions to his mother. He painted a very large number of patterns representing tunnels of various sorts also enclosures and "containers", and several large-size paintings of a man.

Here we have, thus, a sudden change of pictorial representation from rigid neat and static formal elements to dirty and muddy patterns that coincided in time with considerable symptomatic improvement and was based on specific fantasies linking birth and defaecation.

#### 4. ORGANISATION OF STRUCTURE.

Several groups of graphic components have been briefly analysed in the foregoing accounts. Those trends which received excessive emphasis in a part of or throughout each individual series are shown in table IV.

Our next task is to determine, 1. in what manner the various tendencies have contributed to the integration of isolated structure into the whole pattern. 2. If the excessive emphasis shown in one or some of these trends bears a relationship to, a. manifestations of emotional disturbance and adjustment, b. clinical types of somatic dysfunctions, c. crudescence or recrudescence of dysfunctions in the course of treatment observation.

Clinical Aspects. Generally speaking children attended at weekly intervals. An exception were cases VI.XV.XXIX.XXXIII. who attended twice a week for a period while in-patients. Following marked cyclic changes a small number were seen only every two weeks. Attendances for follow-ups varied from once a month to once every three months. All the children were observed and treated by the psychiatrist. In addition 11 mothers attended the psychiatrist either for a limited time or throughout. In case XXIX. (an orphan) no

no adult was seen. Treatment had to be interrupted in case I. as the family left the London area.

Clinical changes shown in the course of the year were brought into relationship with home- and school environment, the child's phase of maturation and clinic impressions. For purposes of the final assessment of progress the group was divided into 5 categories.

1. Children who had shown a prolonged (from 6 months to one year) and complete remission of somatic dysfunction as well as good environmental adjustment. (Cases IV.V.IX.XIV.XV.XXII.XXIII.XXIV.XXIX.XXX.XXXII.XXXVIII.XXXX.)

2. Remission of somatic symptoms as above but incomplete environmental adjustment. This was often due to adverse living conditions. (Cases III.VII.VIII.XI.XII.XXI.XXVIII.XXXIII.XXXIV.XXXV.XXXIX.)

3. Prolonged remission (up to 6 months) of somatic dysfunction with infrequent relapses and good environmental adjustment. (Cases XIII.XVII.XVIII.XXVI.XXVII.XXXVII.)

4. As 3. plus incomplete environmental adjustment. (Cases I.XIX.II.X.XVI.XIX.XX.XXXI.)

5. Child's condition remained unchanged. (Cases VI.XXXVI.)

Functional Grouping of Graphic Trends. The preliminary study of these trends was based on empirical experimentation, i.e. their emergence was first observed during the painting process and later they were analysed by comparing and contrasting a large number of completed products.

TABLE V.

Suggested Functional Grouping of Trends.

Function	Tension Trends	Colour Trends	Structure Trends
Kinesthetic (Innate movement patterns)	Rigidity Fluency	? High C.R. ? Low C.R.	Vertical Horizontal Ring forms Prim.schema
Area or Space (Spacefilling in social situations, goal tendency).	Expansion Compression	Lucidity Opacity Colour-mass Colour-line High C.R. Low C.R.	Enclosure Container Overlay Differential Space.
Interrelationships. (Affective, cognitive, conative.)	Automatism Differentiation	Colour-focus Form -Focus	Synthetic Incapacity Abstract Pattern Design Summation Cohesion

Table V. offers a possible classification of these tendencies on a functional basis, illustrating several levels of functioning. A number of points should be noted in evaluating this method of grouping. First it is derived from a selected range of children in two developmental phases. It would, therefore, be rash to generalise from it to graphic behaviour as a whole. Secondly the functional significance of these components is only explained through their interrelation with other traits in the individual child.

Organisation of Structure. We must now go one step further to see how the variants or extreme tendencies, shown in table IV. become manifest in the course of attempted synthesis.

Both Eng and Luquet have given many examples of the ways by which children at various ages organise their paintings. Bühler and Piaget have shown that the development of conceptual thinking passes through stage by stage solutions which are applied to every aspect of the outer world. Thus, "defective synthesis", as an adult would describe it must be considered an essential part of the child's personality. Synthetic incapacity can be of but little diagnostic value unless we are given clues to emotional factors which interfere with cognition. Furthermore it is obvious that no normative assessment of these stages is possible. The intention in first describing modes of integration was to record a number of stages which often successively appeared in one and the same series during the course of a year.



1.Disintegration. Apparently total or almost total dissolution of form elements.In many cases a mixture of mature and primitive structure may be seen.Associations with this type of painting may frequently bring out surprisingly well organised content. Often a specific colour emphasis is maintained.Products of this nature are the rule between the 2 and 4 year level.Their appearance as a temporary phenomenon at a later stage was extremely common in this group.

2.Summation. This can be defined as a side by side arrangement of forms,individually recognisable but seemingly unrelated.Their relationship is often brought out by means of verbal integration.One or the other of single forms may eventually assume greater significance and progressive integration sometimes centres on such structures.Summation is usual between 3 1/2 and 5,but in some of the series it predominated up to the age of 9.

3.Abstract Structural Patterns. These are separately described as,owing to the often elaborate verbal associations evoked by them,it is possible that they stand for something different from other paintings.Here symmetry and decorative trends may become integrating factors.

4.Structural Cohesion.Partial integration of form elements is verifiable through inspection of the picture.This is usually an intermediate stage from 2.when summated elements appear in conjunction with increasing differentiation.

5.Realism.Here the relationship between form elements is brought out by means of predominantly realistic representation.

Serial Trends and Treatment. The following showed either sudden or else more gradual cyclic changes of painting patterns, affecting their structure and content.

a.) more sudden (1-2 months duration) VI.XIV.XV.XVI.XIX.XX.XXIV.XXVII.XXIX.XXXIII.XXXVII.XXXX.

b.) more gradual (3 to 5 months) I.II.III.IV.V.VIII.XI.XVIII.XXII.XXIII.XXXVI.XXXIX.

Amongst the remaining either no distinct variations of a more definite nature were shown, or there was evidence of marked<sup>a</sup> perseverative tendency. The latter were VII.X.XII.XIII.XVII.XXI.XXXIV.

Examples. Illustrative material for all these cases is contained in the appendix, each folder having been marked with the number of the cases which it contains.

No.VII. Severe eczema in very withdrawn child of 3/ 1/2. (Afraid of strangers, hides in corners, often mute and negativistic. Refuses to sleep anywhere but in parents bed. Possessive mother, father has duodenal ulcer. The symptom remitted after one year but his reactions to people has basically scarcely changed.) No true fluency developed throughout the whole year. Stroke-movement was predominantly circular without serial variation. Patterns consist of roundish central masses of an opaque character. A small number of ring forms and container patterns can be seen, their colouring is practically always bright red. Verbal associations were more pronounced with black and red and overlay is shown in about one third of his series. This is an extreme example of the fearful space concept (compression) dominating his patterns throughout.

No.VI. (described in chapter 3.) should be mentioned here as an example where expansion, fluency and lucidity alternate with compression, rigidity and opacity. This fluctuation effect denotes a severe type of imbalance when the series as a whole is examined. This boy's condition remained unchanged.

No.XIV. (also mentioned in ch.3.) This boy shows three distinct phases with sudden swings from one to the other.

a.) Very marked rigidity with ring forms, letters, flags. There is

predominance of blues and emphasis on symmetry. Integration largely through summation.

b.) Sudden swing to fluency with increased verbalisation and release of fantasies tinged with aggression and destruction. Projections focus on black, mauve and red. Marked differentiation of structure. Considerable improvement set in during the end of this phase.

c.) Re-establishment of balance between the movement extremes, with diminution of anxiety and progressive realism.

This boy has been free from asthma for over one year, and is making a very good school adjustment.

Case No. XV. Similar to the above, except that "abstract designs" form an important stage to progressive integration.

No. XIX. This boy (5 1/2) has an epileptic heredity and lives in an unhealthy family environment. At 4 he suddenly developed feacal incontinence and became unusually destructive. In his series there are many sudden swings from almost totally disintegrated patterns to a summation or cohesion level. With few exceptions the early products are disorganised and show emphasis on cut off horizontal and vertical strokes as well as limited colour mass. Stroke behaviour is rythmically repetitive and lacks continuity. The second stage was heralded in by smearing of colours in several layers, often using both hands. With increasing rapport his undirected and random behaviour ceased and he developed some confidence. Relapse phases coincided fairly closely with upsets in home environment and increased soiling. During these periods expansive trends appear together with associations of a morbid character. This boy has now completely stopped soiling (i.e. after over 16 months attendance) and his recent paintings show some degree of cohesion. He still shows immature form elements in some of these. There is some likelihood that he may break down again as his school adjustment is a most precarious one.

No. XXVII. This boy (7), attended the clinic for asthma eczema prurigo and associated emotional difficulties (night-terrors, screaming fits, somnambulism.) and various physical complaints such as headaches, sickness and stomach pains. His breathless-attacks frequently arose out of sleep disturbances. Even at the beginning of treatment it became apparent that he had many disturbing dreams which he could ~~only~~ in part remember. When painting he was careful to use as little water as possible and always chose the finest brush. His earliest paintings show a pronounced emphasis on cleanliness, realism, orderliness and symmetry. At that period his night terrors became more frequent. After about one month he suddenly discontinued this mode of painting and started to make abstract

designs which were a disguise for dreams and fantasies which he would at first not verbalise. A gradual release came about from his rather rigid earlier painting, but he never achieved any marked degree of fluency and has now returned to more realistic paintings. His freedom from asthma attacks has lasted for 7 months, but the eczema still fluctuates. His adjustment at school is very good, and the sleep disturbances are no longer in evidence.

Discussion. Though defective integration is an intermediate to better synthesis in all children some patients with pronounced emotional difficulties cannot easily achieve it. Their failure is shown by distinctive emphasis on primary form elements. In No. XIV. we noted the extreme stress on movement and colour as the outward sign of greater fantasy release. At the same time his patterns remained conceptually organised, showed cohesion and were probably visually perceived, though not graphically presented in an integrated way. In another group (e.g. XIX) this imagery is lost with disorganisation and no significant verbal associations are given. It is therefore difficult to assess how these patterns were conceived. Yet we cannot but wonder whether the relative scarcity of projections, the indeterminate colour use and the lack of differentiating structure are not manifestations affecting the child's conceptual ability on a deeper level. The clinical impressions would lead us to believe this. In some children therefore <sup>kinetic factors</sup> may be the only ones to condition fluctuation and disintegration, in others all the primary elements may contribute. In a third type the child's need to express his fantasies through picturing the outer world

seems impossible(as in many of the ~~eczema~~ children,whose outer world pattern is unduly constricted),Here greater freedom is sometimes achieved with abstract patterns which by themselves can give no clue whatever to the nature of the child's fantasy.Yet these patterns are often the most personal ones by virtue of their investment of colour-areas with specific associations.Some therapists think that such asymmetrical patterns are evidence of greater disturbance or withdrawal.This is hardly the whole story,as it does not take into account the inner tension patterns which evade our observations.



Relationship between Trait Combinations and Somatic Dysfunction.

The summarised experimental data shown in table IV. cannot give us more than a clue to this relationship, in view of the small number of cases quoted. At the same time it is of some clinical interest to draw attention to the persistence of certain traits in children with asthma and eczema on the one hand and in children with excretory dysfunctions on the other.

The typical graphic pattern is by no means defined by the isolation of one or two such traits, but rather by the intrinsic tension associated with each pair, i.e. their positive and negative aspects. For instance "excessive rigidity" might perform a positive (integrating) function in a child who, at the same time exhibits an aggressive and expansive space-concept. It is, therefore, both the unevenness of distribution and the reversibility of traits that must be accounted for.

Asthma-Eczema-Prurigo complex and Eczema. Cases I.II.III.VII.VIII.XII.XV.XXVII.XXXI.XXXIII.XXXVI. come in this category. In III.XV.XXXI. the eczema was no longer present when seen in the clinic. Moreover it was reported to have been slight and of minor importance compared with the asthma which was dramatic and strongly paroxysmal. The kinetic elements in all these children (except VIII) gave a strong emphasis on "rigidity".  
and  
This was most striking in the pure eczemas where the asthma was relatively unimportant, and less striking in the pronounced asthma cases where eczema was of less consequence. Two of the

latter showed a phasic swing between fluency and rigidity, in them also relapses of the skin affection alternated with relapses of asthma. When we come to space filling the uniformity becomes already less striking. About half of the children showed "compression", again they were the subjects in whom the eczema component predominated. The remaining ones either showed "expansion" or a relatively balanced attitude to space. Colour trends are even less uniform with emphasis on either high or low colour range. The same is found with differential use of structure. As regards isolated form elements we find a relative predominance of ring forms, "container patterns" and "enclosures". There is a striking absence of synthetic incapacity in these children, insofar as structure is, even in the youngest ones, organised centrifugally and rather rigidly contained. These observations are therefore in some agreement with clinical findings about the asthma-eczema-prurigo syndrome. Although the individual differences between these children are considerable as shown by their varied expression they give to phantasy and colour, they exhibit a degree of uniformity in their attitudes to space and in their kinetic painting behaviour. Another striking finding in the pure eczemas was the <sup>relative</sup> absence in their associations of specific conflict elements.

Excretory Dysfunctions. Amongst the enuresis and encopresis children no such persistency in the kinetic and space trends was found. Instead here there were irregular fluctuations between fluency and rigidity which on the whole never reached an extreme degree. But here the colour element was given much greater emphasis, especially through emphasis on opposing trends. Specific conflict associations were more frequent in these children. (e.g. XIV)

Other Disorders.

Extremes changes, but similar to the type described above were found amongst the epileptic children, where there was also increased automatism.

In the migraine cases traits similar in nature to both the epileptic and asthma eczema groups were seen.

In a very general way these extreme variants are shown on table VI.

TABLE VI.

Graphic Traits and Somatic Dysfunctions.

(Summary)

	Kinetics	Space	Colour	Differential Form	Single Elements	Integr.
Asthma- Ecz.-Prurig.	rigidity	compression	non spec.	non spec.	ring forms enclosure container	centricity
Asthma	basic rigidity, phasic fluency	compression	non spec.	non spec.	as above	varied
Excretory	periodic swings	compression	emph. on opposing trends.	non spec	non spec	lack of centricity
Migraine	rigidity	compression	-	persever- ation	-	summation
Epilepsy	periodic swing to both extremes	expansion	non spec	automatism	-	lack of centricity.

## 5.CONCLUSIONS.

The main thesis of this investigation was concerned with the interrelation between trends in painting and aspects of personality.Emphasis was given throughout to content and form elements which were the product of the child's spontaneous expression.It was postulated for any method in this field to be sufficiently broad,its concepts must be based on the known facts of graphic development.Starting out from this position I endeavoured to proceed into three directions

- 1.to demonstrate links between graphic structure and pictorial content with the help of spontaneous associations and associations in response to directive non-suggestive questioning.

- 2.to explore the "primary components" which enter into graphic structuralisation,

- 3.to study these aspects longitudinally in the course of treatment,taking the time of one year as a standard for comparison.

The links between graphic structure and endopsychic content through associations has been demonstrated in a treatment case when verbal responses were obtained at regular intervals with the same pattern or painting.This has shown that,although most fantasies are relatively unstable,in some cases stability of form and content elements suggesting conflict is relatively great.Responses illustrating similar phenomena have been obtained in other children between the ages of 4 and 7.



When interpreting these we must be careful not to assign to them more than what they actually stand for. With regard to structure similar degrees of relative fixity and instability have been recognised, and not infrequently the link between associations and structure may be demonstrable in individual children. (as e.g. in XV. through the constant association of fantasies suggesting danger with the enclosure pattern.)

To answer the question of what persistent form elements actually stand for an experimental investigation of a therapeutic group of 40 children was undertaken. This group-study is not designed to reveal quantitative data, although quantitative findings have been employed for illustrative purposes. One of these is the rating procedure described under section III.2. This method contains a large subjective element which cannot be evaded by using statistical approaches such as correlation techniques. This subjective element could be somewhat diminished by the use of judges ratings, as has been done in a similar experiment by Elkish (30). But even if such a precaution is taken the method is bound to retain much subjectivity. Generally speaking, however, it possesses more objectivity than <sup>from studying</sup> could be gained the various trends with reference to individual cases only. Its discriminative value as a quantitative measure is, therefore, small, but with reference to a group it can show up the existing differences in extreme trends. The results of this group experiment has thus demonstrated that some children who show profound

generalised anxiety or various conflicts have a predelection for expressing graphic traits which are extremes of the "primary tendencies" which collectively enter into painting. Specificity. It remains uncertain how far the more obvious graphic variants result from innate personality and emotional conflict on the one hand and from maturation on the other. By appraising treatment results there is some evidence that those traits which are personality conditioned would be less easily shifted in the course of <sup>say</sup> one year than others which have been derived from temporary emotional fluctuations, conflicts and progressive maturation. Therefore one of the chief diagnostic criteria in assessing graphic productions in general must depend on the serial element.

When examining traits suggestive of disturbance derived from the total material we may separate three groups of "indicators".

Group I. Traits which remain relatively constant throughout treatment observation. (Innate personality).

Group II. Traits which show fluctuations of various kinds and degrees, but are not progressive in the direction of structural differentiation. (Generalised anxiety and specific conflicts.)

Group III. Traits which show progression and regression with emphasis on the former. (Developmental and in certain cases indicative of "fixation" to earlier developmental levels.)

A classification for these three groups is suggested in table VII.

TABLE VII.  
Indicators.

Group I.	Group II.	Group III.
Persistent and excessive rigidity, fluency, expansion or compression. Automatism, Differentiation. Colour-line. Colour-mass.	Differential Space division, Overlay, Containers and Enclosures. Abstract pattern. Prolonged focus on specific colours, (black, white, red.) Very high or very low colour ratio. Transient rigidity or fluency. Disintegration.	Emphasis of yellow- red range 3-5. green-blue range 5-7. Ring forms and primitive schema up to 5. Vertical and horizontal emphasis up to 3 1/2. Disintegration up to 4.

General Value of Painting Methods. A partial answer to this has already been given under section I. In conclusion it is necessary to call attention to the influence of cultural and environmental backgrounds on pictorial expression. Several studies have thrown light on this. Schubert(102), for example, studied the effects of environment on the child's capacity to draw people and animals in his survey of the drawings of a Siberian hunting tribe where children had practically no drawing experience. He found that, although the drawing of the human form was more elementary than in the average Western child, the way certain animals had been drawn was distinctly superior to anything in Europe. Similar investigations of this kind have been reported by Anastasi and Foley(6.) and W.Dennis(23.).

A series of spontaneous drawings or paintings is therefore able to tell us something of the child's cultural background, his environment and may fairly accurately reveal his level of maturation up to about puberty. In gross disorder such as schizophrenia it may give clues to conceptual disorganisation. In children with less severe disorders the difficulties of drawing valid deductions about the discriminative value of graphic work increase enormously and a detailed study of the personal and developmental elements may reveal certain persistencies in form expression which are well worth further consideration.

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## BIBLIOGRAPHY.

- 1). ALLEN. F. H., Combined Psychotherapy with Children and Parents. Modern Trends in Child Psychiatry. (Ed. Nolan Lewis). International Univ. Press. N. York. 1945.
- 2). ALLEN. F. H., Psychotherapy with Children. N. York. Norton. 1942.
- 3). ALLESCH. G. J. von., Die aesthetische Erscheinungsweise der Farben. Psych. Forsch. 1925. 6.1.215.
- 4). ALLPORT. G. W., Personality. N. York. Holt, 1937.
- 5). ALTSCHULER. R. H., and HATTWICK, La Berta Weiss. Painting and Personality. Vols. I and II. Univ. of Chicago Press. 1948.
- 6). ANASTASI. A., and FOLEY. J.P., An Analysis of Spontaneous Drawings by Children in Different Cultures. J. Appl. Psychol. 20. 689. 1936.
- 7). ANASTASI. A., and FOLEY. J.P., A Survey of the Literature on Artistic Behaviour in the Abnormal: III. Spontaneous Productions. Psych. Monogr. 1942. 52. No. 237.
- 8). APPEL. K.E., Drawings of Children as Aids to Personality Study. Am. J. of Orthopsychiatry. 1931. 31. pp. 129-144.
- 9). BALKEN. E.R., Projective Techniques for the Study of Personality. Psychol. Bull. 1941. 38. 596.
- 10). BELL. J.E., Projective Techniques: A Dynamic Approach to the Story of Personality. N. York. Longmans Green & Co., 1948.
- 11). BENDER. L., Art and Therapy in the Mental Disturbances of Children. J. Nerv. & Ment. Dis. 1937. 86. 249-263.
- 12). BENDER. L., The Goodenough Test in Chronic Encephalitis in Children. J. Nerv. & Ment. Dis. 1940. 91. 277-286.
- 13). BENDER. L., The Visual-Motor Gestalt Test and its Clinical Use. Am. Orthopsych. Monogr. No.3. 1938.
- 14). BENEDICT. R., Patterns of Culture. N. York. 1934.
- 15). BERRIEN. F.K.A. A Study of the Drawings of Abnormal Children. J. Educ. Psychol. 1935. 26. 143-150.
- 16). BLUM. L. H., and DRAGOSITZ. A., Finger Paintings: The Developmental Aspects. Child. Developm. 18.88. 1947.
- 17). BRILL. M. A. A., A Study of Instability using the Goodenough Drawing Scale. J. Abn. Soc. Psych. 1937. 32. 288-305.
- 18). BUHLER. C., From Birth to Maturity. London. 1935.
- 19). BUHLER. C., and KELLEY. G., The World Test: A Measurement of Emotional Disturbance. N. York. Psychol. Corp. 1944.
- 20). BUHLER. K., Die Geistige Entwicklung des Kindes. Jena. 1930.
- 21). BURT. C., Mental and Scholastic Tests. London, 1927.



- 22). COOKE. E., Art Teaching and Child Nature.  
London Journal of Education. 1885.
- 23). DENNIS. W., The Performance of Hopi Indian  
Children on the Goodenough Draw-a-Man-Test.  
J. Comp. Psychol. 1942. 32. 341.
- 24). DESCEUDRES. A., Couleur, Forme, on Nombre?  
Arch de Psychre. 14. 305. 1914.
- 25). DESPERT. J. L., Play Analysis in Research and Therapy.  
Modern Trends in Child Psych. N. York. 1945.
- 26). DESPERT. J. L., Technical Approaches used in the Study  
and Treatment of Emotional Problems in Children.  
Psych. Quart. 11. No. 2. 267. 1937.
- 27). DIX. K. W., Körperliche und Geistige Entwicklung  
eines Kindes. Leipzig. 1912.
- 28). DOLTO-MARETTE. F., Rapport sur l'Interpretation  
Psychoanalytique de Dessins au Cours des Traitments  
Psychotherapeutique. "Psyche". Paris. April, 1949.
- 29). EDELSTON. H., The Analysis and Treatment of a Case of  
Neurotic Conduct Disorder in a Young Child,  
Illustrating the Use and Value of Drawing in Child  
Guidance Technique. J.O.M.Sc. 1939.
- 30). ELKISH. P., Childrens' Drawings in a Projective  
Technique. Psych. Monogr. 1939. 522.
- 31). ENG. H., The Psychology of Childrens' Drawings.  
London. 1935.
- 32). ENGLAND. A. O., A Psychological Study of Childrens'  
Drawings: Comparison of Public School, Retarded,  
Institutionalised and Delinquent Childrens' Drawings.  
Am. J. Orthopsych. 13. 525. 1943.
- 33). EVANS. R. M., An Introduction to Colour. N. York. 1948.
- 34). EYSENCK. H. J., A Critical and Experimental Study  
of Colour-Preferences. Am. J. Ps. 1941. 54. 385.
- 35). EYSENCK. H. J., Dimensions of Personality. London. 1947.
- 36). FRANK. L. K., Projective Methods. Am. Psych. Lect.  
Monogr. No. 10. 1948.
- 37). FREUD. A., The Psychoanalytical Treatment of Children.  
Imago. London. 1946.
- 38). FRIES. M. E., Behaviour Problems in Children Under  
3 Years of Age. Arch. of Pediatrics.  
Nov. 1928. 653-663.
- 39). FRIES. M. E., Interrelated Factors in Development.  
Am. J. Orthopsych. VIII. October. 1938. 726-752.
- 40). FRIES. M. E., Interrelationship of Physical, Mental  
and Emotional Life of a Child from Birth to 4 years  
of Age. Am. J. Dis. Chil. 49. June. 1935. 1546-1563.
- 41). FRIES. M. E., Psychosomatic Relationships between  
Mother and Infant. Psychosomatic Medicine.  
VI. April. 1944.
- 42). GESELL. A., and AMATRUDA. C. S., Developmental Diagnosis.  
N. York. 1947.

- 43). GOLDSTEIN. K., Human Nature in the Light of Psychopathology. Harvard University Press. 1940.
- 44). GOLDSTEIN. K., and ROSENTHAL. O., Zum Problem der Wirkung der Farben auf den Organismus. Schw. Arch. Neur. 1930. 26. 3.
- 45). GOLDSTEIN. K., and SCHEERER. M., Abstract and Concrete Behaviour. Ps. Monogr. 1941. 53. No.2.
- 46). GOODENOUGH. F., Measurement of Intelligence by Drawings. N. York. 1926.
- 47). GRIFFITH. R., Imagination in Early Childhood. London. 1935.
- 48). GUTTMANN. E., and MACLAY. W. S., Clinical Observations on Schizophrenic Drawings. Brit. J. Med. Psych. Vol. 16. 184. 1937.
- 49). GUTTMANN. E., and MACLAY. W. S., Spontaneous Drawings as an Approach to some Problems in Psychopathology. Proc. Royal Soc. Med. 1937. 31.
- 50). HARMS. K., Awakening into Consciousness of Subconscious Collective Symbolism as a Therapeutic Procedure. J. of Child Psychiatry. N. York. Vol. I. Sect. 3. 1948.
- 51). HARMS. K., Kinderkunst als Diagnostisches Hilfsmittel bei Infantilen Neurosen. Z. D. Kinderpsych. 6. 129. 1940.
- 52). HARMS. K., The Psychology of Formal Creativeness. J. Genet. Psych. 69. 97. 1946.
- 53). HENDERSON. D. K., and GILLESPIE. R. D., A Text Book of Psychiatry. Oxford University Press. 1949.
- 54). HUG-HELLMUTH. H., On the Technique of Child Analysis. Inton. J. of Psychoanalysis. Vol. II. 1921.
- 55). ISAACS. S., Social Development in Young Children. London. 1933.
- 56). JAENSCH. E. R., Über den Aufbau der Wahrnehmungswelt und ihre Struktur im Jugendalter. Leipzig. 1923.
- 57). JUNG. C. G., Integration of Personality. Kegan Paul. London. 1945.
- 58). KARDINER. A., The Individual and his Society.
- 59). KATZ. D., The World of Colour. London. 1935.
- 60). KERSCHENSTEINER. G., Die Entwicklung der Zeichenrischen Begabung. München. 1905.
- 61). KLAGES. L., Ausdrucksbewegung und Gestaltungskraft. Barth. Leipzig. 1923.
- 62). KLEIN. M., The Oedipus Conflict in the Light of Early Anxieties. Contr. to Psychoanalysis. London. 1948.
- 63). KLOPFER. B., Personality Diagnosis in Childhood. Modern Trends. N. York. 1945.
- 64). KLOPFER. B., and KELLY. A., The Rorschach Technique. N. York. 1942.
- 65). KROTSCH. W., Rythmus and Form in der Freien Kinderzeichnung. Leipzig. 1917.
- 66). LEVINE. K. N., A Comparison of Graphic Rorschach Productions with Scoring Categories of the Verbal Rorschach Record in Normal States, Organic Brain Disease, Neurotic & Psychotic Disorders. Arch. Psych. N. York. 282. 63. 1943.

- 67). LEVINSTEIN. S., Kinderzeichnungen bis zum 14ten. Lebensjahr. Leipzig. 1905.
- 68). LEVY. D., Release Therapy in Young Children. Psychiatr. 1938. I.
- 69). LEVY. D., The Use of Play Technique as Experimental Procedure. Am. J. Orthopsych. 1933. 3. 266-277.
- 70). LEVY. J., The Use of Art Technique in Treatment of Childrens' Behaviour Problems. Proc. Am. A. Ment. Def. 1934. 58. 258-260.
- 71). LEWIS. N. D. C., Graphic Art Productions in Schizophrenia. Proc. Am. Soc. Nerv. & Ment. Dis. 1928. 5. 344.
- 72). LEWIS. N. D. C., The Practical Value of Graphic Art in Personality Studies. Psychoanalytical Review. XII. 3. 1925.
- 73). LINDBERG. W. Experimental Studies of Colour and Non-Colour Attitudes in Schoolchildren and Adults. Levin & Munksgaard. Copenhagen. 1938.
- 74). LOEWENFELD. V., The Nature of Creative Activity. London. 1939.
- 75). LOWENFELD. M., Play in Childhood. London. 1935.
- 76). LUQUET. H. G., La Narration Graphique chez l'Enfant. J. de. Psych. 21. 183. 1924.
- 77). LUQUET. H. G., Le Premier Age du Dessin Enfantin. Arch. de Psych. Vol. 12. 1912.
- 78). LUQUET. H. G., Les Dessins d'un Enfant. Etude Psych. Alcan. Paris.
- 79). MACHOVER. K., Personality Projection in the Drawing of the Human Figure. Thomas. Springfield. III. 1949.
- 80). MCINTOSH and PICKFORD., Some Clinical and Artistic Aspects of a Child's Drawings. Brit. J. Med. Psych. XIX. 342. 1943.
- 81). MEAD. M., Mind, Self and Society. N. York. 1934.
- 82). MURPHY. G., Personality. Harper Bros. 1947.
- 83). NAPOLI. P., Interpretive Aspects of Finger Painting. J. Ps. 1947. 23. 93.
- 84). NAUMBURG. M., Studies of the Free Art Expression of Behaviour in Problem Children and Adolescents as a Means to Diagnosis and Therapy. Nerv. & Ment. Dis. Monogr. N. York. 1947.
- 85). PARTRIDGE. L., Childrens' Drawings of Men and Women. Studies in Education. Vol. 2. 163. 1902.
- 86). PAULSSON. G., The Creative Element in Art. Scand. Scient. Review. II. 111-173. 1902.
- 87). PETERS. H. N., Experimental Studies of the Judgmental Theory of Feeling. J. Exp. Ps. 1943. 33. 285.
- 88). PETERS. W., Zur Entwicklung der Farbwahrnehmung nach Versuchen an abnormen Kindern. Fortschr. Psych. III. 150. 1915.

- 89). PFISTER. H. O., Farbe und Bewegung in der Zeichnung Geisteskranker. Schw. Arch. Neurol. Ps. 34. 325. 1934.
- 90). PIAGET. J., The Child's Conception of the World. London. 1929.
- 91). PICKFORD. R. W., Some Interpretations of a Painting. Brit. J. Med. Psych. XVIII. 2.219.
- 92). PRINZHORN. F., Die Bildnerei der Geisteskranken. Berlin. 1922.
- 93). READ. H., Education Through Art. London. 1944.
- 94). ROGERSON. C. H., Play Therapy in Childhood. Oxford University Press. 1939.
- 95). ROGERSON. C. H., The Psychological Factors in Asthma-Prurigo. Quart. J. Med. VI. 36.7. 1937.
- 96). RORSCHACH. H., Psychodiagnostik. Bern. 1932.
- 97). RORSCHACH. H., Analyse einer Schizophrenen Zeichnung. Zblblatt. d. Psychoanal. u. Psychother. 4. 1913.
- 98). ROUMA. G., Le Langage Graphique de l'Enfant. Brussels. 1913.
- 99). SCHACHTEL. A. H., The Rorschach Test with young Children. Am. J. of Orthopsych. 14. 1-9. 1944.
- 100). SCHILDER. P., Image and Appearance of the Human Body. London. 1925.
- 101). SCHOLL. R., Zur Theorie und Typologie de Teilinhaltlichen Beachtung von Form und Farbe. Ztson. of. Psychre. 101. 281. 1927.
- 102). SCHUBERT. A., Drawings of Orotchen Children and Young People. J. Genet. Psychol. 37.232. 1930.
- 103). SCUPIN. E., and G., Bubi's erste Kindheit. Leipzig. 1907.
- 104). SPRINGER. N. N. A., Study of the Drawings of Maladjusted and Adjusted Children. J. Gen. Psych. 1941. 58.131.
- 105). STERN. G., and W., Die zeichnerische Entwicklung eines Knaben von 4ten bis 7ten Lebensjahr. Z. angew. Psych. 1909. II. 498.
- 106). STERN. W., Cloud Pictures. A New Method for Testing Imagination. Character and Personality. Vol. XVI. pp. 132-146.
- 107). STERN. W., Uber verlagerte Raumformen. Z. ang. Ps. 1909. II. 498.
- 108). SULLY. J., Studies of Childhood. N. York. 1908.
- 109). TOBIE. H., Die Entwicklung der teilinhaltlichen Beachtung von Farbe und Form im Vorschulpflichtiozen Kindesalter. Ztson. f. Ang. Psych. Beih. 38. 1926.
- 110). WAEHNER. T. S., Interpretation of Spontaneous Drawing and Paintings. Genetic Psych. Monogr. 1946. 33. 1-70.
- 111). WARTEGG. E., Gestaltung und Charakter. Beih. z. Zt. f. angew. Psych. No. 84. Barth. Leipzig. 1939.
- 112). WEISS. E., and ENGLISH. O. S., Psychosomatic Medicine. Saunders. 1949.
- 113). WICKES. F., The Same World of Childhood. Appleton. N. York. 1929.
- 114). WOLFF. W., The Personality of the Pre-School Child. N. York. 1946.